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ABSTRACT

To aid in providing remediation for the language and cognitive skills of disadvantaged children, the UCLA Head Start Research and Evaluation Center compared three language programs: the UCLA Preschool Language Program, the Behavioral Research Laboratories' Readiness for Language Arts Program, and an unstructured Placebo Program. Each of the subjects, 163 4-year-old Head Start children, was randomly assigned by sex to one of the programs. A no-treatment Head Start group was used for control. Subjects were pre- and posttested on the Peabody Picture Vocabulary Test, the Caldwell Preschool Inventory, the Gumpgookies, the Behavioral Research Laboratories #1, the Visual Discrimination Inventory, and the UCLA Early Childhood Language Tests for Four-Year-Olds. Experimental treatment extended over 24 weeks, 12 in each of 2 semesters. Testing results (104 subjects) revealed that the subjects in the two task-oriented structured language programs were superior in performance to both Placebo and Control groups. Although the UCLA and BRL programs differed in content, activities, and materials, results were similar. Afro-Americans did less well than Anglo- or Mexican-Americans, girls slightly better than boys, and subjects with experienced teachers did better than those with inexperienced teachers. Appendixes comprise four-fifths of this report. (MH/Author)

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University of California, Los Angeles
Graduate School of Education

HEAD START RESEARCH AND EVALUATION CENTER

FINAL REPORT 1968-1969

August 1969

Research Project: A Comparison of Three Intervention Programs with Disadvantaged Preschool Children

Principal Investigators: Joseph Edwards and Carolyn Stern

PROBLEM

Children from advantaged families enter our public schools with a broad and complex learning history, even if their parents make no conscious effort to teach them during their preschool years. Resnick (1967) states that as a result of each child's interaction with his environment he develops a complex response repertoire that enables him to discriminate and categorize stimuli. He learns spatial and temporal concepts which permit him to locate objects and events in time and space and to orient himself with respect to them. He is fairly good at recognizing relevant aspects of a learning stiuation and focusing his attention on them. He can talk with adults and has a linguistic competence that allows him to learn from verbal exposure. These instances are just a sample of the multitude of skills and concepts which each advantaged six-year-old acquires as a result of interacting with the universe of stimuli he encounters.

The great challenge for early education is to create an environment that will maximize the learning abilities of children from all kinds of home backgrounds. This environment would consist of a population of stimuli to which specific responses and classes of responses become learned.

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Disadvantaged children learn to discriminate and categorize; however, in contrast with advantaged children, they develop their complex response repertoires with a different set of stimuli. For example, a young Negro boy in the ghetto can discriminate between members of the "Cobra" and "Raven" gangs by noting slight differences in "natural" hair styles. These subtle cues mean nothing to the advantaged child who discriminates between cobra and raven because one is a snake and the other a bird. Each child learns to respond to salient cues in the population of stimuli with which he interacts.

The disadvantaged child has a complex and varied stimulus environment; the difficulty lies in that there is little overlap or transfer from the ghetto stimulus world to the middle-class school environment. Critical stimulus response bonds established in the ghetto are not reinforced in the middle-class schools. For example, physical aggression is punished in our public schools but in the ghetto this behavior is reinforced and becomes a life style for many children.

Language patterns and idioms are also different. The black ghetto child learns that "shining on" has two meanings, one for home and one for school. In this example, the advantaged child does not encounter a linguistic discrepancy. He does not use the term to describe a method of manipulating people. In his middle-class environment the term is only used to denote radiating or luminescence.

The problem of the child in compensatory preschool programs is not so much that he has had insufficient stimulation, but rather that his language experiences are so different. One approach to this deficiency is to introduce a population of middle-class language stimuli and make them salient for disadvantaged children whether they are from black, brown, or white home backgrounds. The implicit, if not explicit, goal of the Head Start Program is to provide opportunities for learning appropriate responses to sets of stimuli so as to increase the likelihood that socioeconomically handicapped children will succeed in the middle-class schools.

In this same vein, educators advocating this approach to the problem must 1) establish a curriculum, the stimulus environment, and 2) develop instructional programs and materials, the vehicles for teaching the desired stimulus-response bonds.

The present study compared the effectiveness of three procedures designed to bridge the language gap between advantaged and disadvantaged children. In brief, this involved the administration of instructional programs which were expected to facilitate Head Start children's acquisition of cognitive and linguistic competencies with large samples of middle-class words, concepts, and principles.

RELATED RESEARCH

There is ample evidence that children from disadvantaged homes have difficulty mastering the skills and concepts needed to succeed in the predominately middle-class school culture. While many factors contribute to this condition, the most important single element is that of language deficiency (cf. Brown, 1964; Bruner, 1961; Deutsch, 1963; Deutsch & Brown, 1964; Freeburg & Payne, 1967; Hunt, 1961; and Blank & Solomon, 1969).

The importance of linguistic competence cannot be ignored. McConnell (1968) states that it is the development of language which enables the child to assimilate information and to integrate it with other sensory and motor experiences, thus deriving a meaningful code by which he learns to manipulate and control his environment. High levels of cognitive ability, concept formation, reasoning, and problem solving are dependent upon high levels of linguistic ability. Because language as it is heard and spoken, read and written, is the key to all thought, communication, and learning, it is a primary factor in all intellectual and social development. If a child enters school at age six without having attained the language skills commensurate with those of his peers, he will rapidly fall behind educationally and this achievement or performance gap will then increase geometrically.

A crucial need facing educators today, and indeed facing the entire society, is to discover the means to counteract the lack of readiness for learning which disadvantaged children exhibit when they enter public schools. Ten years ago, many nursery school teachers would have been highly resistant to the inclusion of systematic language development in their curricula. These teachers were more concerned with block play, arts and crafts, and music and rhythms, all of which were activities geared to foster socialization. Contrast this with a recent survey in which 119 Head Start and Day Care teachers selected additional course work in "developing language skills" most frequently as either the first, second, or third choice from a list of 25 possible training courses (Gordon, 1966).

Along with this change in emphasis, there has been a rash of language-based compensatory preschool programs. These intervention programs have been described by Stern (1967) as lying along a continuum defined in terms of structure. The Bereiter-Engelmann (1966) program would be at one end of the distribution, that of Minuchin & Biber (1967) at the other. In the first, the position is that language deficiencies can best be compensated by a systematically-structured program which emphasizes patterned repetition and drill. Based on "logical rather than linguistic analogies," it conceives language as the "vehicle for the teaching of concepts and the rules for manipulation of concepts" and does not concern itself with the "social and expressive uses" of language.

The developmental approach, at the other extreme, sees language as but one aspect of the child's growth pattern. Because it is considered to be dependent upon many non-verbal factors, with important emotional and psychological components, the language program is placed within the total experiential context of the preschool program. Between these two positions are the approaches used by Gray, Klaus, Miller, & Forrester (1966); Weikart (1966); Hodges, Stearns, & Spicker (1966);Hartman (1966); and Stern (1968), just to name a few.

In addition to these investigators, the Office of Economic Opportunity has funded a wide variety of preschool language interventions. At the present time, Louise Miller is conducting a research project comparing three language programs in Louisville, Kentucky. Five Head Start Evaluation & Research Centers - Hawaii, Southern University, Tulane, University of South Carolina, and University of Texas - have special language studies as part of their evaluation intervention. Language studies are also a major part of the "model" programs in Follow-through designs, and the Institute for Developmental Studies in New York City has been carrying out research with intervention programs for approximately six years.

Throughout all of these programs, in some more explicitly than others, there is the underlying assumption that language is the key which will unlock the child's ability to learn. The more complex and varied the language tools the child is capable of manipulating, the greater will be his control over those basic cognitive processes which are prerequisite

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to the type of intellectual functioning which leads to school success (Bernstein, 1964; Carroll, 1964; John & Goldstein, 1964; Gordon, 1965; and Blank & Solomon, 1968).

Since 1962, research projects throughout the nation have attempted to determine whether various preschool intervention programs with three- and four-year-olds actually make a difference in these children's later school performance. Various projects, representing different theoretical models, have produced either interim or final reports (Crowell & Fargo, 1967; Curtis & Berzonsky, 1967; Sprigle, Van de Riet & Van de Riet, 1967; Weikart, 1967; Hodges et al., 1967; Deutsch, 1968; Di Lorenzo & Salter, 1968; Klaus & Gray, 1968). Although the cumulative results of these projects offer little to cheer about (Weikart, 1969), the evidence seems to indicate that the more structured or task-oriented the program, the greater the gains in immediate intellectual competence and, where follow up data are available, academic achievement as well.

In the study by Sprigle et al. (1967), the experimental group was given a series of instructional tasks based on Piaget's developmental theory, the kindergarten control group received a traditional curriculum, and an at-home control group received only pre- and posttests. Results indicated that the mean I.Q. score for the experimental group rose significantly, the kindergarten group remained unchanged, and the at-home control group decreased. The investigators hypothesized that the teacher variable may have been the major factor contributing to the significant differences among groups.

In the study reported by Crowell & Fargo (1967), the effects of a modified Bereiter-Engelmann program and a general language-oriented enrichment program with disadvantaged children in Hawaii were compared. These investigators reported a significant difference on a number of measures of cognitive ability and achievement between the two groups given language training, compared with a traditional preschool group as well as a regular control group.

Of the several studies comparing language programs currently underway, Weikart (1969) states that little information is available. He reports that Karnes, Teska, & Hodgins (1969) found that both the Bereiter-Engelmann Language Training Program and the Karnes curriculum based on the Illinois Test of Linguistic Abilities were more effective in promoting intellectual growth than a traditional nursery school program. Dickie (1968) reported on the effectiveness of three methods of language instruction in preschool and found no differences in the effects of unstructured versus structured methods of instruction. Di Lorenzo & Salter (1968) and Di Lorenzo, Salter & Brady (1969) report better success with structured programs of the Bereiter-Engelmann type than with unstructured preschool programs. Blank & Solomon (1968) reported marked increases in intelligence scores following an individualized tutorial program where the specific instructional goal was the development of language for cognition.

It is clear that more information is needed to evaluate the relative effects of theoretically divergent language curricula upon the cognitive, linguistic, social-emotional, and academic growth of disadvantaged children from different ethnic backgrounds.

To summarize, ample research evidence is available to support the need for some type of preschool language intervention to counteract the demonstrated language discrepancies of disadvantaged children. Recognition of this need has given rise to the development of a variety of language programs, the establishment of compensatory preschool centers, and particularly Project Head Start. Many Head Start teachers attempt to provide an environment roughly analogous to the "hidden curriculum" of the middle-class home (Strodtbeck, 1964). They emphasize such features as providing the child with warm and secure relationships with adults, establishing effective social interactions with peers, fostering appropriate emotional reactions, cultivating curiosity, enlarging the scope and variety of experience, and so forth. While there is no doubt that these traditional nursery school programs and objectives have value, there is mounting evidence that the disadvantaged child requires a far more intense and structured preschool curriculum to develop his cognitive and linguistic competencies (Stern, 1968).

OBJECTIVES

The major objectives of this research project were:

(1) To determine whether or not special language instruction will improve the linguistic abilities and specific cognitive skills of disadvantaged preschool children; and

(2) To discover which of three language programs is most effective in improving disadvantaged children's cognitive and linguistic competencies.

These two general objectives were implemented by testing the following hypotheses:

(1) Children taught with the UCLA Preschool Language Program would obtain higher scores on a test of school readiness, as well as on other tests of language and school motivation, compared to children given the Behavioral Research Laboratories' Readiness for Language Arts Program.

(2) Children receiving structured language training, either the UCLA program or the Behavioral Research Laboratories program, would score higher on tests of language achievement, school readiness, and motivation than Head Start children in a placebo control group which received an equal amount of contact with the same teacher but no systematic training; and

(3) Children participating in any of these three programs would score higher on tests of readiness and motivation than comparable children in regular Head Start classes.

METHOD

Instructional Programs

Three programs, each of which was expected to remediate deficiencies with four-year-old disadvantaged Head Start children, were contrasted.

1) The UCLA Preschool Language Program - This program was developed at the University of California, Los Angeles, as part of a five-year experiment funded by the United States Office of Education. Originally prepared for the Children's Centers, a population slightly less disadvantaged than the Head Start children, the materials were somewhat modified for use in the present investigation (Stern and Keislar, 1969).

This structured program begins with a three-day sequence called the "Language of Instruction." During this period, the children are taught to respond to instructions such as "look," "point to," "find," etc. They are also taught to listen to and identify sounds, label pictures, and "read" picture stories.

In the beginning units, the children are introduced to some of the materials they will be using in various phases of the program. They are taught to handle booklets and to make selections by marking in specific areas. They also become familiar with the red and green feedback system provided by the A. B. Dick special mimeograph ink. At this time they also learn to listen and follow taped instructions, and record and listen to their own voices telling stories.

After this initial familiarization, the child is able to use a wide variety of response modes in the instructional program. Usually two different activities are presented each day for a total of approximately fifteen minutes. These activities sample across the following content areas:

(a) Natural science (animal life and growth, weather, etc.)

(b) Social studies (family relationships, the house and its environs, etc.)

(c) Mathematics (quantity and size relationships, geometric shapes, comparisons, and number concepts, with numerals 1 to 5).

(d) While instruction in language skills cuts across many subject areas, story-telling and re-telling are techniques specifically designed to develop the child's facility in verbal expression. The language units provide the opportunity to verbalize appropriate language models, using pattern-practice procedures. Other units teach letter-recognition and simple pre-reading skills.

(e) Problem solving - Children learn skills such as seriation and classification using concepts of mathematics (shape and number), nature study (animal life), and social studies (clothing, furniture, etc.). The logical operations of identity, affirmation, negation, and joint denial are also presented in subject matter contexts.

The program is presented four days a week for 24 weeks. There are 183 instructional units, with two units usually presented per day. The structured lesson takes approximately 15 minutes of the four- to five-hour school day. A detailed breakdown of the instructional sequence and the behavioral objectives of the various units are presented in Appendix A.

2) Readiness for Language Arts - This program, prepared by Cynthia Buchanan, is published by the Behavioral Research Laboratories in Palo Alto, California (1967). It is intended that the teacher will administer the program to the entire class, using a choral responding procedure. However, a field test of the materials presented in this fashion (Stern, 1969) demonstrated that this procedure was inappropriate for Head Start children. Also, there was a wide range of variation in the procedures used and time spent on the program by the individual teachers. Since the objective of the present study was to test the effectiveness of the materials under optimal and controlled conditions, the BRL program was presented in the same way and by the same person who presented the other two intervention programs.

While the published program includes six teacher manuals and six large demonstration booklets, the daily allotment of 15 minutes made it possible to present only the first three:

(a) Book 1: Basic Skills and Concepts. The children learn to tell left from right, to name twelve colors, to identify geometric shapes and a number of animals, and to interpret actions in a simple story sequence. The concept "letter" is introduced and the children learn to recognize and name the letters a, b, c, and d.

(b) Book 2: The Small Letters. This book tells the long story of a lion's trip through Alphabet Land. In the course of the story, the children learn to recognize all the small letters of the alphabet. They also learn the alphabet sequentially. The concept of the printed word is introduced. The children learn to name the letters in words in the order of left to right.

(c) Book 3: The Capital Letters. A story is again used to review the small letters and to introduce the capital letters. The adventures of a lion and tiger teach the children to recognize and name each capital letter. The students learn the function of capital letters as they identify the letters in some common proper names.

For consistency of presentation, the three books were divided into 95 segments or lessons; these were presented four days a week for 24 consecutive weeks. The instructional sequence and the content of each segment are described in Appendix B.

3) Placebo Program - To control for the effect of a special teacher, a "Placebo" program, developed at the UCLA Head Start Evaluation and Research Center, was administered by the same person, also in groups of four or five children. The placebo program included activities such as:

(a) Listening to songs. The children listen to records and are encouraged to make up their own dances to the music.

(b) Group games. These activities consist of having the teacher lead the children in games such as fingerplay, "Simon Says," etc.

(c) Listening to stories and poems.

(d) Coloring. Here the children are given dittoed materials and blank paper to color on their own.

As in the previously described programs, the activities were presented four days a week for 24 consecutive weeks. Each child participated for approximately 15 minutes per day. A detailed outline of this program is presented in Appendix C.

Subjects

The subjects in this research project were 163 four-year-old children, 74 girls and 89 boys, in two classes in each of five Head Start sites under five Delegate Agencies in a metropolitan area. In four sites the children were randomly assigned by sex to one of the three conditions described, so that in each class one-third of the children were assigned to each treatment. In the fifth site, to prevent diffusion effects, no treatments were administered and all the children were used for the control. Pretest data describing the initial subject population are presented in Tables 1 and 2. Table 1 provides the mean age and I.Q. by sex and ethnic group for each of the five Head Start sites. Table 2 presents the same data for each of the four treatment conditions.

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Sites

All classes used in this experiment were housed in Protestant Church facilities. Two sites were located in severely depressed Afro-American residential areas. Two other sites were situated on the fringes of two economically depressed Mexican-American communities. The fifth site, the control group, was in a depressed Afro-American and Mexican-American neighborhood.

The criteria employed for selection of the four experimental sites was the availability of a separate room which could be completely given

TABLE 1

Mean Age (Months) and IQ, by Site, for Sex and Ethnic Groups of Pretest Sample

	Site 1			Site 2			Site 3			Site 4			Site 5		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Total	28			30			34			30			30		
CA		52.6	3.4		51.4	3.1		50.9	4.6		53.3	5.2		50.8	3.3
IQ		70.7	22.9		66.2	17.3		81.1	18.5		82.8	15.2		74.5	17.7
Male	13			18			19			17			15		
CA		53.7	3.3		51.3	2.9		50.2	5.3		54.1	4.2		50.5	3.3
IQ		73.8	26.4		66.4	20.2		79.3	22.3		83.8	18.0		72.1	18.7
Female	15			12			15			13			15		
CA		51.7	3.3		51.7	3.5		51.2	3.6		52.3	6.3		51.1	3.5
IQ		68.1	20.3		65.8	13.5		83.3	13.2		81.5	11.2		76.7	17.0
Afro-American	1			30			33			0			25		
CA		-	-		51.4	3.1		50.9	4.7		-	-		50.8	3.5
IQ		-	-		66.2	17.3		80.9	18.8		-	-		73.2	18.7
Mexican-American	19			0			1			13			4		
CA		52.1	3.6		-	-		-	-		54.2	4.3		50.5	3.3
IQ		65.1	20.1		-	-		-	-		78.2	19.1		83.3	11.1
Anglo-American	8			1			0			17			1		
CA		54.5	2.1		-	-		-	-		52.6	5.7		-	-
IQ		86.4	26.0		-	-		-	-		86.3	10.8		-	-

TABLE 2

Mean Age (Months) and IQ by Treatment, for Sex and Ethnic Groups of Pretest Sample

	UCLA			BRL			Placebo			Control			Total		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Total	39			39			44			30			152		
CA		50.4	4.0		53.5	3.9		52.1	4.4		50.8	3.3		51.8	4.1
IQ		75.7	16.7		75.1	18.6		76.0	23.0		74.5	17.7		75.4	19.2
Male	19			22			26			15			82		
CA		50.5	4.6		53.9	4.2		52.4	4.9		50.5	3.3		51.8	4.2
IQ		77.6	18.9		78.9	19.3		72.7	26.0		72.1	18.7		75.5	21.4
Female	20			17			18			15			70		
CA		50.3	3.4		53.0	3.5		51.7	3.6		51.1	3.5		51.7	4.0
IQ		74.2	15.0		70.4	19.0		80.9	17.2		76.7	17.0		75.3	16.7
Afro-American	21			20			23			25			89		
CA		49.8	4.4		52.6	3.4		51.0	3.8		50.8	3.5		51.0	3.8
IQ		74.3	15.5		75.1	16.6		72.6	24.3		73.2	18.7		73.7	19.1
Mexican-American	13			12			8			4			37		
CA		51.7	3.1		54.6	4.9		52.1	2.9		50.5	3.3		52.6	3.9
IQ		75.9	21.1		70.1	21.7		64.1	17.2		83.3	11.1		72.3	19.8
Anglo-American	5			7			13			1			26		
CA		49.8	4.0		54.1	3.1		54.0	5.6		-	-		53.1	4.8
IQ		80.0	7.6		85.0	17.2		89.4	18.0		-	-		85.7	16.0

over to the language project, where children could be taught without undue interruption, and where the instructional materials and equipment could be stored safely.

Evaluation Instruments

All children participating in this study were pre- and posttested with the following instruments:

1) The Peabody Picture Vocabulary Test (Dunn, 1965). This test was employed to provide an estimate of the child's verbal intelligence by measuring his receptive vocabulary.

2) The Preschool Inventory (Caldwell, 1968). This inventory was used to give a measure of achievement in areas regarded as necessary for success in school. The measure was developed to permit educators to highlight the degree of disadvantage a child from a deprived background has at the time of entering school in order to help eliminate any observed deficits. Another purpose was to make available an instrument that was sensitive to experience and could be used to demonstrate changes associated with educational intervention.

3) The Gumpgookies: A Test of Motivation to Achieve (Ballif and Adkins, 1968). This test was designed to measure the motivation of young children to achieve in school. The hypothesized response constituents of motivation to achieve are: (a) purposive responses, e.g., establishing school achievement as a goal; (b) ethical responses, e.g., evaluating self-achievement as good conduct; (c) affective responses, e.g., expecting positive affect from achieving in school; (d) conceptual responses, e.g., conceptualizing self as an achiever; (e) cognitive responses, e.g., knowing instrumental behavior necessary for successfully achieving; (f) personal responses, e.g., possessing personal characteristics conducive

to being motivated to achieve; and (g) social responses, e.g., possessing social skills that facilitate achievement motivation.

4) The BRL #1. This test was constructed at the UCLA Head Start Evaluation and Research Center to assess the instructional objectives of Demonstration Book #1 of the Behavioral Research Laboratories' Readiness for Language Arts program.

5) The Visual Discrimination Inventory. This test was also developed at the UCLA Head Start Evaluation and Research Center and is designed to measure visual discrimination in children ages 3-6 years.

6) The UCLA Early Childhood Language Tests for Four-Year-Olds. This battery of achievement tests, developed at the UCLA Research Projects in Early Childhood Learning, is designed to measure the instructional objectives of the UCLA Preschool Language Program. The battery consists of both individual and group tests. The individually administered tests are: (a) Picture Reading, (b) Parallel Sentence Production, (c) Opposites, (d) Numerals, (e) Animals and Homes, (f) Problem Solving, and (g) Colors. The group tests include (a) Numerals, (b) Problem Solving, (c) Shapes, and (d) Letter Recognition. The test battery is described in the manual presented in Appendix D.

Procedure

1) Pretest. The instruments described in the preceding section were administered by research assistants and para-professionals employed by the Evaluation and Research Center. The order of presentation of tests at each site was random. The amount of time spent pretesting at each site was approximately five weeks.

2) Instruction. The three instructional programs were presented by the same person to groups of five children at a time at each site, with a

different person assigned to each site. The program administrators were selected from female applicants from the local community. As far as possible, they were assigned to Head Start sites where the children were from the same ethnic group and community. Four teachers were employed: three female Afro-Americans and one female Anglo-American with a fair understanding of Spanish. All four were similar in background and experience to the assistant teachers normally employed in Head Start classes.

The experiment extended over 24 weeks; 12 weeks in each of two semesters. Instruction was given four days per week and took approximately two hours per day for all programs. On the fifth day, the teachers came to the UCLA Head Start Evaluation and Research Center to receive materials and directions for the next week of instruction; they discussed any problems they encountered at the site or with the programs and interacted with each other and the staff at the Center. The Project Director visited each site approximately twice a week to make sure that the programs were running according to schedule and to provide assistance and advice as needed.

Each of the two classes at each site had five children assigned to each of the three treatment conditions. In other words, the teacher at any one site had six groups of five children each; two groups were given the UCLA Preschool Language Program, two groups the BRL Readiness for Language Arts Program, and two the Placebo Program.

To avoid repeated set-up time, the two groups for each treatment were taught successively; however, from day to day the order of presentation of the treatments was varied. For example, a weekly order of presentation of treatments to six groups for a particular site might be as follows:

Week 1: $A^1 A^2$; $B^2 B^1$; $C^2 C^1$;

Week 2: $B^1 B^2$; $A^1 A^2$; $C^1 C^2$; etc.

The order of presentation of treatments for two 12-week semester by site or teacher is presented in Appendix E.

The daily schedule for administering the programs was as follows:

Teacher arrives at site at 8:00 A.M.

8:00 - 9:00	Prepare set-up for first treatment of the day and review all programs.
9:00 - 9:15	Mingle with staff and children; locate Group 1.
9:15 - 9:30	Group 1.
9:30 - 9:35	Locate Group 2.
9:35 - 9:50	Group 2.
9:50 -10:00	Break.
10:00 -10:10	Set-up for second treatment.
10:10 -10:15	Locate Group 3.
10:15 -10:30	Group 3.
10:30 -10:35	Locate Group 4.
10:35 -10:50	Group 4.
10:50 -11:00	Break.
11:00 -11:10	Set-up for third treatment.
11:10 -11:15	Locate Group 5.
11:15 -11:30	Group 5.
11:30 -11:35	Locate Group 6.
11:35 -11:50	Group 6.
11:50 -12:00	Clean up materials, etc.

3) Posttest. The same instruments used for pretesting were administered as posttests.

RESULTS

During the course of this experiment, there was a high percentage of attrition in the subject population. Of the 163 children in the original pretest sample (see Tables 1 and 2), only 104 were available for posttesting. The age and I.Q. means of the posttest sample are presented by Head Start Site in Table 3.

As indicated earlier, all children in each class were randomly assigned by sex to one of three treatments: 1) the UCLA Preschool Language Program, 2) the Behavioral Research Laboratories' Readiness for Language Arts, and 3) a Placebo Control. In addition, a Regular Control, consisting of children enrolled in similar Head Start classes but with no special intervention, was included for some of the analyses. The mean age and I.Q. for children in all four groups are presented in Table 4. All children received three basic criterion measures: the Peabody Picture Vocabulary Test, the Preschool Inventory, and the Gumpgookies (a school motivation measure developed by the University of Hawaii). The children in the three treatment groups also received 15 tests developed at the UCLA Head Start Evaluation and Research Center: The Visual Discrimination Inventory, the BRL Concepts Test, and 13 subtests of the UCLA Early Childhood Language Battery. Scores on these 18 dependent variables, adjusted for I.Q. and pretest score for the particular variable, were computed by treatment (four levels), ethnic group (three levels), Head Start site (four levels), and sex. The data from a series of two-way analyses of covariance based on the scores for the 18 dependent variables for each of these four groupings are presented in Tables 5-8. Table 9 reports the results of Newman-Keuls tests of ordered means (Winer, 1962) where significant effects were obtained.

Effects of Language Instruction

The six dependent measures on which significant treatment differences were found included the Preschool Inventory, the Visual Discrimination Inventory, and four subtests of the UCLA Language Battery: Picture Reading, Home Environment Language, Problem Solving, and Lower Case Letters. (See Table 5.) Newman-Keuls tests of ordered mean differences (Table 9) on the four subtests of the UCLA Language Battery revealed the following: 1) For both Picture Reading and Home Environment Language, the UCLA group scored significantly higher than the Placebo group; 2) On the Problem Solving subtest, both the BRL and UCLA groups scored significantly higher than the Placebo group; and 3) The subtest requiring recognition of lower case letters showed only the BRL group to be significantly superior to the Placebo group. On all of these tests, there were no statistically significant differences between the UCLA and the BRL programs. All of the treatment groups were significantly superior to the Regular Control on the Preschool Inventory, and the UCLA group was superior to both the BRL and Placebo groups on this measure.

Another significant difference between the language-based treatments occurred on the Visual Discrimination Inventory. Although both the BRL and UCLA groups scored significantly higher than the Placebo, the mean score for the BRL group was significantly higher than that of the UCLA group.

Effects of Ethnic Group

In addition to the instructional treatment factor, three levels of ethnic group were tested: 1) Afro-American, 2) Mexican-American, and 3) Anglo-American. Table 6, summarizing the findings concerning the relationship of ethnic membership to posttest performance, shows significant main effects on six measures, but no measurable interaction effects between ethnicity and instructional treatment.

The dependent variables with significant main effects were the Peabody Vocabulary Test, the Visual Discrimination Inventory, and the following four subtests of the UCLA Language Battery: Picture Reading, Animals and Their Homes, Problem Solving, and Sequencing.

Newman-Keuls tests (Table 9) computed to determine the source of the obtained differences between pairs of ethnic group means, showed that Anglo-American children scored significantly higher on the Peabody Picture Vocabulary Test than either the Mexican-American or Afro-American children, but no significant difference was found between means for Mexican-American and Afro-American children. On the Visual Discrimination Inventory, Mexican-American children scored significantly higher than Afro-Americans, while the other mean differences were not significant.

Tests of ordered mean differences on the four subtests of the UCLA Language Battery indicated that: 1) For Picture Reading, Anglo-American and Mexican-American children scored significantly higher than Afro-Americans; 2) For Animals and their Homes, the Mexican-American and Anglo-American children scored higher than the Afro-American children; 3) For Problem Solving, Anglo-American and Mexican-American scored higher than Afro-American children; and 4) For Sequencing, Anglo-American children scored higher than Afro-Americans. In all these subtest comparisons, the mean differences between Mexican-American and Anglo-American children were not significant.

Effects of Head Start Sites

Effects of differences in Head Start sites were inextricably confounded with differences among the teachers who administered the programs. Thus the site variable actually reflects a composite factor.

No measurable interaction effects between site and treatment were found. Table 7 indicates significant main effects for the Peabody Picture Vocabulary Test, the Visual Discrimination Inventory, the Gumpgookies, and six subtests of the UCLA Language Battery: Picture Reading, Numbers, Animals and Their Homes, Problem Solving, Lower Case Letters, and Sequencing. Table 9 presents the relevant values on the Newman-Keuls analyses.

The mean score on the PPVT for Site 4 was significantly higher than the means of the other three sites (see Table 9). At Site 1 the mean score on the Visual Discrimination Inventory was significantly superior to those of the other three sites. When the mean scores on the Gumpgookies were analyzed, Sites 1, 3, and 4 scored higher than Site 2.

Tests of ordered mean differences on the seven UCLA Language subtests revealed the following: 1) The mean score on the Picture Reading test showed Site 4 to be significantly superior to the other three sites. The Animals and Their Homes subtest mean for Site 4 was significantly higher than for Sites 2 or 3, with Site 1 also having higher mean scores on this measure than Site 3; 3) On the Numbers subtest, the mean score for Site 1 was significantly higher than for either Site 2 or 3; 4) For Problem Solving, Site 3 scored significantly lower than Ss in the other three sites; 5) For Lower Case Letters, Site 1 scored significantly higher than Site 2; and 6) For Sequencing, Site 4 scored significantly higher than Site 3. On all of the above measures, no other mean differences were significant on the Newman-Keuls test.

Effects of Sex

The main effects of sex and the interactions between sex and instructional treatments are reported in Table 8. The expectation that females would score significantly higher on those measures which relied most heavily on verbal skills was given only limited support. Girls received significantly higher scores than boys on only three dependent variables: Numbers, Colors, and Lower Case Letters. None of the sex by treatment interactions were significant.

DISCUSSION

Many problems arose during the course of this investigation. For example, the theft of tape recorders and instructional materials delayed the administration of the programs at two different Head Start sites. A member of the research study's teaching staff was forced to terminate because of an illness in her family. At another site, a fire set by vandals disrupted the systematic presentation of the program for several days. In still another site, the rent was not paid and the teacher was locked out of her room and the instructional materials confiscated for almost a week.

The major problems, however, were attrition and absenteeism. At the time of the interim report, December 1968, the attrition rate for the three experimental treatment groups was approximately 15%. However, by June 1969, the attrition rate had reached 54%. Some families moved, some children had parents who felt the value of Head Start did not warrant the minimal amount of effort necessary to get their child to school, and others simply dropped out. Absenteeism, the second major source of concern, could be attributed to natural causes such as a flu epidemic and flooding due to unusually heavy rain storms. However, at one site children were frequently not brought in because the gasoline in the Head Start bus had been siphoned out of the gas tank. In addition, sporadic absenteeism was due to the low level of importance with which parents viewed regular school attendance for these young children. Whatever the reason, 25 to 30 per cent of the children in each site were absent on any given day. Table 10 presents the mean number of absences by instructional treatment and Head Start site for those children who were available at the beginning and end of the investigation.

It is difficult to determine or evaluate the relative effects that absenteeism and attrition had on the over-all impact of the three intervention programs employed in this investigation. One can simply assume that regular attendance would have facilitated the effectiveness of each of the programs. In any event, for those children who remained in a program for the duration of the study, some interesting results were obtained.

Language Instruction

It had been hypothesized that both the language-based programs would facilitate the acquisition of linguistic and cognitive competencies but that the UCLA Language Program would show gains in more cognitive as well as language skills than the BRL Readiness for Language Arts Program.

The first hypothesis was partially supported, with significant main effects obtained on six different dependent variables: the Preschool Inventory, the Visual Discrimination Inventory, and the Picture Reading, Home Environment Language, Problem Solving, and Lower Case Letters subtests of the UCLA Language Battery. In most instances, the UCLA and BRL programs were superior to both the Placebo and the Regular Control. The second hypothesis was supported only in one instance: the UCLA groups scored significantly higher than the BRL on the Preschool Inventory. However, an unanticipated finding showed the BRL group to be significantly superior in the perceptual skills measured by the Visual Discrimination Inventory.

A post hoc review of the content and activities of the BRL program reveals a reasonable basis for these findings. In the first place, since the major emphasis of this program is on letter recognition, it is not unexpected that these children did well on this subtest. Also, practice in discriminating letter forms can be expected to produce improved ability in discriminating abstract figures and letter-like forms, the type of items found on the Visual Discrimination Inventory. There is also, in this program, a great deal of choral responding, echoing and producing parallel sentences, and answering questions in complete sentences. The high frequency response requirements of the programmed format also tends to reinforce constant attention and application with concomitant improvement in learning strategies. Thus, while the UCLA and BRL programs differed considerably, with the UCLA program providing a wide range of objectives as well as response modes, and the BRL program limited to fewer content areas and only one basic response mode, there are many similarities between these two structured language programs.

Another basis for the few differences in mean scores of the two language treatment groups was probably the fact that the children in the UCLA program did not achieve mastery at each successive level. This was due to the fact that the program had been developed and tested with a Children's Center population. Other test data provides some evidence that these children have higher initial language facility, and make more satisfactory progress through the program than the more disadvantaged Head Start children. The pressure for providing daily instructional materials for this treatment made it impossible to improvize and adapt the program so as to provide sufficient learning experiences to insure adequate mastery with each type of skill acquisition.

Finally, it may very well be that the UCLA program, with its greater breadth of subject matter content, developed a variety of cognitive skills and behaviors which were not sampled by the criterion tests. A major area of difference between the two programs was in the unmeasured and subjective realm of the affective domain. That is, both the teachers and the children expressed quite different emotional reactions to participation in the different programs. The teachers, who were initially unfamiliar with all the experimental treatments and thus held no preconceived biases, soon began to find the BRL program repetitive and stultifying. Whereas the children in the UCLA program came eagerly to the daily sessions, often asking the teacher when it would be their turn, children in the same class who were in the BRL treatment were very reluctant to leave the class group for the treatment session. While it is very true that this type of anecdotal data is not particularly reliable, affective differences may be a critical variable to consider in the selection of an intervention program planned to extend over a protracted period. It may very well be that the children will acquire the instructional objectives but simultaneously acquire a negative attitude toward teachers and the total learning environment.

While the data reported add support to Weikart's (1969) thesis that children will manifest gains in itellectual achievement from structured programs, the fact that the Placebo program, which also used a highly structured format, did not produce comparable gains points up the need to specify more precisely the appropriate learning activities. The most effective preschool intervention program would seem to be one which is not only highly structured and task-oriented but also provides many opportunities for the acquisition of verbal skills through active participation and repetition.

Ethnic Group

The effect of ethnic group was considered to determine if there were 1) differences in the performance of the various ethnic groups over treatments and 2) interactions which might suggest that one instructional treatment was more effective with one ethnic group than another.

First, regarding group differences, significant main effects were obtained on six dependent measures: the Peabody Picture Vocabulary Test, the Visual Discrimination Inventory, and the Picture Reading, Animals and Their Homes, Problem Solving, and Sequencing. On these measures, Mexican-American and Anglo-American children were superior to the Afro-American. Moreover, the only significant difference found between Anglo-Americans and Mexican-Americans was on the mean scores for the Peabody Picture Vocabulary Test, with Anglo-American children doing significantly better than Mexican-American.

Although the Anglo-Americans had been expected to perform better than Afro-Americans and Mexican-Americans, this was not consistently confirmed, and the Mexican-American children seemed to profit more from instruction than Afro-American. This result is confounded, however, as the majority of the Mexican-American children were in classes with a good percentage of Anglo-Americans, while the Afro-American groups had few children from other ethnic groups in their classes. This seems to support the evidence presented in the Coleman report pointing up the importance of providing high achieving peer models in classrooms with disadvantaged children. In addition, a "self-fulfilling prophesy" effect might have been operative in the racially-mixed sites, where teachers were more apt to hold higher expectations for pupil performance.

A second consideration was that of interactions between ethnic group and instructional treatment condition. It had been postulated that Mexican-American children would have the greatest difficulty with the BRL Readiness for Language Arts program, for it was entirely verbal and several non-English-speaking children had been accepted into the program. However, no significant interactions between ethnic group and instructional condition were found.

Sex

One of the most commonly accepted sex-related differences is that girls perform better than boys on tests which required specific verbal skills. While there was some support to this popular notion in that girls were superior on three of the subtests, the differences were certainly less than had been anticipated. Since the BRL Program places heavy emphasis on verbal and auditory skills, an interaction between sex and instructional treatment condition was also expected, but this was not supported.

Head Start Sites

It had been anticipated that there would be a significant interaction between class site (which included differences in teacher characteristics) and method of instruction. The results did not support this hypothesis. However, the main effects for Site were significant for nine different measures: the Peabody Picture Vocabulary Test, the Visual Discrimination Inventory, the Gumpgookies, and six subtests of the UCLA Language Battery: Picture Reading, Numbers, Animals and Their Homes, Problem Solving, Lower Case Letters, and Sequencing. This would support other studies which find teacher and classroom composition a far more important source of variance than that of differences in instructional procedures *per se*. (E.g. see Stern, 1969.)

The importance of the site-teacher variable was clearly demonstrated in that Site 1, which had the Head Start teacher with the greatest amount of preschool teaching experience, was most frequently found to be superior to the other sites on various criterion measures.

The fact that Site 2 scored significantly below the other three sites on the school motivation measure may also be due to the fact that this site was in the most depressed area of the city. It was located in the center of the Black Ghetto, there was little contact with other ethnic groups, and it lacked the type of local community support which could have supplied such simple instructional necessities as paper, crayons, clay, etc. No doubt children in a severely depressed neighborhood reflect the depression and hopelessness of their parents, with corresponding lowered levels of aspiration and achievement. On the UCLA Language Battery subtests, Sites 1 and 4 usually performed significantly better than Sites 2 and 3. Sites 1 and 4 each contained both Mexican-American and Anglo-American children, with the largest proportion of the Anglo-American children in attendance at Site 4. Although all the children in Sites 2 and 3 were Afro-American, those at Site 3 were drawn from a less depressed area, on the fringe of the Black Ghetto. These Black Ghetto families were more apt to be achievement-oriented and many had already attained a measure of socioeconomic success.

At Site 1, the curriculum and activities were clear and well integrated into the children's daily activities. This was reflected in the significant improvement demonstrated by the Mexican-American children, particularly considering their comparatively low initial performance level.

Unfortunately, Site 1 was an exception; at the other three sites the teachers clearly lacked direction and purpose and did not bother to prepare daily lesson plans. Activities designed to foster the acquisition of cognitive and linguistic skills were conspicuously absent. This was true even at Site 4 which was predominately Anglo-American and not characterized by the same extent of poverty and lack of parental involvement as Sites 2 and 3. Although it was assumed that the delegate agencies take an active role in determining the instructional curricula of their Head Start sites, this rarely was the case, and individual teachers were given a great deal of latitude and autonomy. On numerous occasions a teacher would take her class to a local playground where they would spend the entire morning in "free play." When at the Head Start site, the teacher would spend her time drinking coffee and gossiping with an aide or volunteer. One teacher, when asked what her lesson plan was for that day, angrily retorted, "I decide what to do with my children when I arrive each morning. I've been doing it this way for two years and I don't see any reason to change."

The intervention programs used in this investigation occupied only a very small portion of the school day, usually 15 minutes. One can only guess how much more dramatic the effects of these programs would have been on student performance if the Head Start sites had geared their daily activities to augment or reinforce the instructional objectives incorporated in either of the two language-based intervention programs.

Recommendations

It is clear that the question of what and how to teach Head Start children needs a great deal more systematic investigation. Although the results of this study did not confirm many of the original expectations, it does provide some implications for future practices.

1) It seems quite clear that the effectiveness of preschool intervention programs is closely related to the degree to which there is a systematic presentation of a language curriculum with well-defined objectives.

2) Important changes in children's performance cannot be obtained unless the teachers who implement the program are willing to follow the specified curriculum and also have some experience with teaching young children.

3) Considering the prevalence of irregular attendance and absenteeism, as far as possible instructional programs and materials should be developed

in discrete units which do not require sequential exposure over a period of several days.

SUMMARY

Three groups of 40 Head Start children participated in one of three preschool intervention programs: the UCLA Preschool Language Program, the BRL Readiness for Language Arts Program, and the Placebo Program. Subjects in the two structured language programs were superior to the Placebo group as well as a Regular Control on a number of academic performance measures. Although the two language programs were quite different in terms of their instructional content, activities, and materials, there were few measurable differences between the test performance of the two groups. Irrespective of the instructional treatment, Anglo-American and Mexican-American children tended to perform better than the Afro-American children. Most of the significant differences were noted between the two latter groups. The Head Start site which employed the teacher with the most preschool teaching experience tended to have higher mean scores than the other three sites, which employed paraprofessional teachers. Girls, it was found, tended to do better on a few measures than boys; however, this effect was much smaller than anticipated. The results indicate that 1) the more task-oriented a structured preschool intervention program, the greater will be the gains in specific cognitive and linguistic skills, and 2) given a specific program, children taught by experienced preschool teachers tend to evidence the greatest gains.

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TABLE 3

Mean Age (Months) and IQ, by Site, for Sex and Ethnic Groups of Posttest Sample

	Site 1			Site 2			Site 3			Site 4			Site 5		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Total	16			22			20			19			30		
CA		60.5	2.9		57.9	2.6		57.5	3.2		59.4	4.6		57.8	3.3
IQ		83.7	24.8		81.8	19.8		85.9	19.5		105.6	23.1		86.9	23.5
Male	6			14			10			8			15		
CA		61.8	1.8		58.2	2.9		57.4	2.8		61.4	4.2		57.5	3.3
IQ		75.5	28.6		80.1	21.6		82.1	17.5		98.5	27.2		84.3	24.6
Female	10			8			10			11			15		
CA		59.7	3.2		57.4	2.0		57.6	3.7		57.9	4.5		58.1	3.5
IQ		88.6	22.4		84.8	17.0		89.6	21.6		110.7	19.2		89.6	22.9
Afro-American	0			22			20			0			25		
CA		-	-		57.9	2.6		57.5	3.2		-	-		57.8	3.5
IQ		-	-		81.8	19.8		85.9	19.5		-	-		88.0	24.2
Mexican-American	10			0			0			8			4		
CA		59.4	2.9		-	-		-	-		60.0	5.0		57.5	3.3
IQ		76.7	19.6		-	-		-	-		96.8	28.2		86.5	21.0
Anglo-American	6			0			0			11			1		
CA		62.3	1.9		-	-		-	-		58.9	4.5		-	-
IQ		95.3	29.9		-	-		-	-		112.0	17.1		-	-

TABLE 4

Mean Age and IQ, by Treatment, for Sex and Ethnic Groups of Posttest Sample

	UCLA			BRL			Placebo			Control			Total		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Total	25			24			28			30			107		
CA		57.7	3.4		59.8	4.0		58.6	3.1		57.8	3.3		58.4	3.5
IQ		91.9	22.3		88.8	23.6		87.2	24.0		86.9	23.5		88.5	23.3
Male	11			13			14			15			53		
CA		61.0	21.3		60.4	4.3		58.5	2.7		57.5	3.3		58.7	3.5
IQ		86.6	20.4		92.4	25.9		77.2	22.6		84.3	24.6		84.1	23.4
Female	14			11			14			15			54		
CA		56.9	3.2		59.2	3.8		58.6	3.5		58.1	3.5		58.2	3.5
IQ		99.1	22.6		84.5	21.0		97.2	21.7		89.6	22.9		93.0	22.3
Afro-American	14			11			17			25			67		
CA		57.1	2.8		58.4	3.5		57.8	2.6		57.8	3.5		57.7	3.1
IQ		82.5	19.0		91.3	17.0		79.8	21.1		88.0	24.2		84.5	23.3
Mexican-American	6			7			5			4			22		
CA		59.3	3.5		59.7	5.2		60.0	2.8		57.5	3.3		59.3	3.8
IQ		93.2	22.1		79.4	28.9		85.2	26.3		86.5	21.0		85.8	24.1
Anglo-American	5			6			6			1			18		
CA		57.8	4.6		62.7	2.1		59.5	4.3		-	-		59.9	4.0
IQ		115.0	19.9		95.0	28.3		109.8	18.1		-	-		103.7	24.5

TABLE 5

Adjusted Posttest Means and Standard Errors by Instructional Treatment Condition

VARIABLES	UCLA PROGRAM		BRL PROGRAM		PLACEBO		CONTROL		F-RATIOS	P
	M	SE	M	SE	M	SE	M	SE		
Peabody	95.54	3.88	89.78	4.04	86.43	3.72	86.92	3.45	1.22	-
Preschool Inventory	47.44	1.44	42.35	1.52	40.73	1.37	36.78	1.27	5.34**	.01
Gumpgookies	39.52	1.35	38.08	1.42	38.73	1.28	38.53	1.34	0.12	-
BRL #1	15.98	0.49	16.38	0.46	15.35	0.44	-	-	1.26	-
Visual Discrimination	23.49	1.31	27.68	1.36	21.52	1.26	-	-	5.68**	.01
UCLA Tests										
1) Picture Reading	24.13	1.76	23.05	1.80	17.69	1.69	-	-	4.05*	.05
2) Parallel Production	93.09	5.29	92.40	5.48	78.85	5.07	-	-	2.39	-
3) Opposites	3.21	0.49	3.20	0.52	1.83	0.48	-	-	2.65	-
4) Numbers	56.52	3.12	56.12	3.24	48.96	2.99	-	-	1.94	-
5) Home Environment Language	15.00	0.68	14.38	0.71	12.52	0.65	-	-	3.78**	-
6) Animals and Homes	13.47	0.78	13.73	0.80	11.30	0.74	-	-	3.07	-
7) Problem Solving	54.77	1.70	55.53	1.76	49.87	1.62	-	-	3.41*	.05
8) Colors	17.60	1.03	17.67	1.07	15.68	0.98	-	-	1.26	-
9) Shapes	5.13	0.27	5.14	0.28	4.42	0.26	-	-	2.49	-
10) Lower Case Letters	4.98	0.49	6.06	0.51	3.85	0.47	-	-	5.19**	.01
11) Upper Case Letters	4.79	0.52	5.74	0.53	4.49	0.49	-	-	1.55	-
12) Rhyming	3.20	0.30	3.42	0.31	2.77	0.28	-	-	1.32	-
13) Sequencing	3.07	0.35	3.44	0.37	2.60	0.34	-	-	1.41	-

TABLE 6

Adjusted Posttest Means and Standard Errors by Ethnic Group

VARIABLES	Afro-American		Mexican-American		Anglo-American		F-Ratios	P
	M	SE	M	SE	M	SE		
Peabody	86.43	2.63	90.04	3.99	101.97	4.17	4.73**	.01
Preschool Inventory	43.65	1.20	41.70	1.80	43.49	2.01	0.81	-
Gumpgookies	38.79	1.05	38.82	1.57	40.25	1.68	0.73	-
BRL #1	15.85	0.37	16.01	0.56	15.80	0.59	0.03	-
Visual Discrimination	22.06	1.06	27.36	1.58	25.35	1.68	4.41**	.01
UCLA Tests								
1) Picture Reading	18.80	1.36	23.04	2.08	26.54	2.08	5.04**	.01
2) Parallel Production	82.28	4.17	91.99	6.53	96.50	6.60	1.27	-
3) Opposites	1.79	0.43	3.49	0.63	4.09	0.63	2.91	-
4) Numbers	49.20	2.48	60.76	3.84	57.01	3.78	2.97	-
5) Home Environment Language	13.54	0.56	13.63	0.86	15.13	0.87	0.96	-
6) Animals and Homes	11.26	0.60	15.29	0.94	13.78	0.91	6.63**	.01
7) Problem Solving	50.00	1.28	56.30	2.02	57.97	1.97	6.60**	.01
8) Colors	16.21	0.81	17.34	1.30	18.26	1.31	0.73	-
9) Shapes	4.85	0.22	4.89	0.35	4.91	0.34	0.03	-
10) Lower Case Letters	4.75	0.41	5.09	0.62	5.08	0.65	0.01	-
11) Upper Case Letters	4.70	0.41	4.98	0.62	5.62	0.65	0.52	-
12) Rhyming	3.16	0.23	2.92	0.35	3.18	0.37	0.23	-
13) Sequencing	2.63	0.26	3.14	0.40	4.02	0.42	3.92*	.05

TABLE 7

Adjusted Posttest Means and Standard Deviations by Head Start Site

VARIABLES	Site 1		Site 2		Site 3		Site 4		F-Ratios	P
	M	SD	M	SD	M	SD	M	SD		
Peabody	87.43	4.04	83.57	3.59	88.53	3.75	103.58	4.01	4.10*	.05
Preschool Inventory	40.48	1.82	42.15	1.65	45.23	1.69	44.53	1.82	0.71	-
Gumpgookies	39.17	1.52	34.12	1.31	42.08	1.44	39.62	1.46	5.25**	.01
BRL #1	15.78	0.58	16.00	0.52	15.67	0.54	16.05	0.58	0.08	-
Visual Discrimination	31.55	1.53	22.21	1.54	22.50	1.43	23.43	1.49	7.09**	.01
UCLA Tests										
1) Picture Reading	20.78	2.17	18.62	2.00	19.00	1.91	28.02	2.03	4.37**	.01
2) Parallel Production	90.06	7.06	80.10	6.69	84.42	6.53	98.23	6.61	1.37	-
3) Opposites	3.96	0.73	2.52	0.71	1.27	0.55	3.37	0.60	2.67	-
4) Numbers	71.38	4.11	44.20	4.35	53.11	3.72	55.67	3.74	5.45**	.01
5) Home Environment Language	13.37	0.95	13.90	0.90	13.24	0.84	15.20	0.86	0.61	-
6) Animals and Homes	14.29	0.96	11.89	0.99	10.86	0.86	14.39	0.91	3.41*	.05
7) Problem Solving	59.20	2.26	52.93	2.04	47.16	1.81	56.26	1.90	6.98**	.01
8) Colors	17.79	1.30	17.21	1.21	15.18	1.21	17.75	1.26	0.79	-
9) Shapes	4.93	0.36	4.86	0.33	4.85	0.33	4.87	0.34	0.32	-
10) Lower Case Letters	6.41	0.61	5.56	0.55	4.65	0.57	4.39	0.61	2.93*	.05
11) Upper Case Letters	5.87	0.64	5.13	0.57	4.27	0.59	4.72	0.63	1.52	-
12) Rhyming	3.28	0.35	3.92	0.31	3.48	0.32	3.19	0.34	0.68	-
13) Sequencing	3.09	0.41	2.90	0.37	2.11	0.38	4.07	0.41	4.15*	.05

TABLE 8

Adjusted Posttest Means and Standard Deviations by Sex

VARIABLES	Male		Female		F-Ratios	P
	M	SD	M	SD		
Peabody	89.15	2.94	91.61	2.94	0.35	-
Preschool Inventory	42.95	1.24	43.31	1.24	0.04	-
Gumpgookies	38.31	1.51	38.70	0.40	0.06	-
BRL #1	15.52	0.38	16.25	0.32	1.72	-
Visual Discrimination	23.48	1.15	24.83	1.15	0.77	-
UCLA Tests						
1) Picture Reading	21.77	1.49	21.48	1.49	0.02	-
2) Parallel Production	91.01	4.44	84.93	4.45	0.91	-
3) Opposites	2.69	0.42	2.73	0.42	0.01	-
4) Numbers	49.89	2.54	57.55	2.54	4.66*	.05
5) Home Environment Language	13.88	0.58	13.98	0.58	0.02	-
6) Animals and Homes	12.45	0.65	13.16	0.66	0.56	-
7) Problem Solving	51.97	1.43	54.50	1.44	1.66	-
8) Colors	15.44	0.81	18.46	0.82	6.49*	.05
9) Shapes	4.35	0.24	5.05	0.22	1.40	-
10) Lower Case Letters	4.23	0.41	5.61	0.43	6.45*	.05
11) Upper Case Letters	4.69	0.43	5.27	0.43	0.90	-
12) Rhyming	3.01	0.24	3.21	0.24	0.32	-
13) Sequencing	3.22	0.23	2.85	0.21	0.77	-

TABLE 9

Summary of Significant Differences on Newman-Keuls Tests of Ordered Means by Dependent Variables

Dependent Variable	Group Comparisons[1]	q	r/f	$p <$
Picture Reading	UCLA/Placebo	3.83	3/69	.05
	Anglo-American/Afro-American	5.24	3/69	.01
	Mex-American/Afro-American	3.03	2/69	.05
	Site 4/Site 2	5.27	4/68	.01
	Site 4/Site 3	5.02	3/68	.01
	Site 4/Site 1	3.13	2/68	.05
Home Environment Language	UCLA/Placebo	3.76	3/69	.05
Problem Solving	BRL/Placebo	3.53	3/69	.05
	UCLA/Placebo	2.97	2/69	.05
	Anglo-American/Afro-American	5.53	3/69	.01
	Mex-American/Afro-American	4.46	2/69	.05
	Site 1/Site 3	6.01	4/68	.01
	Site 4/Site 3	5.92	3/68	.01
	Site 4/Site 2	3.82	2/68	.05
Animals and Their Homes	Mex-American/Afro-American	5.68	3/69	.01
	Anglo-American/Afro-American	3.89	2/69	.01
	Site 4/Site 3	4.74	4/68	.01
	Site 4/Site 2	2.40	3/68	.05
	Site 1/Site 3	4.61	3/68	.01
Sequencing	Anglo-American/Afro-American	4.58	3.69	.01
	Site 4/Site 3	5.09	4/68	.01
Numbers	Site 1/Site 2	4.30	4/68	.05
	Site 1/Site 3	3.43	3/68	.05
	Girls/Boys	F=4.66	df=1/72	.05

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[1] In each comparison the first group is always superior to the second.

TABLE 9 (Continued)

Dependent Variable	Group Comparisons	q	r/f	p<
Lower Case Letters	BRL/Placebo	4.72	3/69	.01
	Site 1/Site 2	3.44	3/68	.05
	Girls/Boys	F=6.45	df=1/72	.05
Colors	Girls/Boys	F=6.49	df=1/72	.05
Preschool Inventory	UCLA/Control	7.89	4/99	.01
	BRL/Control	4.54	3/99	.01
	Placebo/Control	3.51	2/99	.05
	UCLA/BRL	4.38	3/99	.01
	UCLA/Placebo	3.35	2/99	.05
	Site 4/Site 2	5.94	4/68	.01
	Site 4/Site 3	3.84	3/68	.01
	Site 4/Site 1	4.13	2/68	.05
Visual Discrimination Inventory	BRL/Placebo	15.29	3/69	.01
	UCLA/Placebo	4.89	2/69	.01
	BRL/UCLA	10.40	2/69	.01
	Mex-American/Afro-American	4.05	3/69	.05
	Site 1/Site 2	6.93	4/68	.01
	Site 1/Site 3	6.28	3/68	.01
	Site 1/Site 4	5.89	2/68	.01
Peabody Picture Vocabulary Test	Anglo-American/Mex-American	3.42	3/69	.05
	Anglo-American/Afro-American	4.45	2/69	.05
Gumpgookies	Site 3/Site 2	5.81	4/68	.01
	Site 4/Site 2	4.13	3/68	.05
	Site 1/Site 2	3.07	2/68	.05

TABLE 10

Mean Days Absent by Instructional Treatment and Head Start Site for the Duration of Instruction[1]

Instructional Condition	Head Start Site			
	1	2	3	4
UCLA Program	23.71	22.83	16.57	25.88
BRL Program	28.25	25.20	9.00	26.40
Placebo Control	21.43	18.88	11.50	29.60

[1] Each instructional program was presented for a total of 96 days.

APPENDIX A

Description of the Preschool Language Program

This section is in two parts: Part 1, a sequential outline of instructional activities and Part 2, a list of categories describing the content of instruction for two semesters of the Preschool Language Program (1968-1969). These instructional materials were presented to groups of five four-year-old Head Start children by employees of the Head Start Language Project.

The layout on each page gives the week and day on which the program was administered, the name of the program, the types of materials used, and a brief statement of the behavioral objectives of the program.

PART 1. OUTLINE OF INSTRUCTIONAL ACTIVITIES FOR THE UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
1-1	Language of Instruction 1	Script Listening Game: Noise makers and pictures of those objects	Children will attend, listen, label objects and pictures of objects, and transfer from three-dimensional objects to pictures of those objects.
		Teacher Booklet	Children will identify and label pictures of objects; echo sentences describing different pictures.
1-2	Language of Instruction 2	Script Listening Game: (Same as 1-1)	(Same as 1-1)
		Teacher Booklet	Children will identify and label pictures of objects. Given a statement about a picture, children will produce a parallel sentence for a similar picture.
1-3	Language of Instruction 3	Script Listening Game: (Same as 1-1)	(Same as 1-1)
		Teacher Booklet	Children will identify and label pictures of objects; echo sentences; when shown pictures, will produce sentences to describe them.
2-1	Color 1: Green	Script Teacher Booklet Tape and Recorder	Children will identify and label the color green.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
2-2	Color 2: Red	Script Teacher Booklet Tape and Recorder	Children will identify and label the color red.
2-3	Color 3: Red and Green	Script Teacher Booklet	Children will identify and label the colors red and green.
2-4	Language of Instruction 4: Color Feedback 1	Script Teacher Booklet Student Booklets Marking Pens Bell	Children will identify and label the colors red and green, turn pages in a booklet, mark spots under pictures to get red and green color feedback. A green spot tells the child he selected correct picture; red tells him to mark again.
3-1a	Numbers 1: Introduction	Script	Children will count 1-2 referring to different parts of their bodies (e.g., nose, eyes, ears).
3-1b	Language of Instruction 5: Booklet Instructions	Script Teacher Booklet Teacher Picture Student Booklets Marking Pens Bell	Children will identify and label the colors red and green, turn pages in a booklet when bell rings, discriminate between red and green color feedback. Green tells the child he selected correct picture; red tells him to mark again.
3-2a	Language of Instruction 6: Review of Color Feedback 1	Script Teacher Picture Student Booklets Marking Pens Tape and Recorder	Children will listen to taped instructions and discriminate between red and green color feedback. Green tells the child he selected the correct picture; red tells him to mark again.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
3-2b	Problem Solving 1: Negation 1	Script Student Booklets Marking Pens Tape and Recorder	Given two pictures, children will respond appropriately to a negative statement.
3-3a	Numbers 2: Counting 1-2	Script Blocks	Children will count 1-2 using blocks.
3-3b	Problem Solving 2: Negation 2	Script Student Booklets Marking Pens Tape and Recorder	Given two pictures, children will respond appropriately to a negative statement.
3-4a	Numbers 3: More Than One	Script Cardboard Squares	Children will count 1-2 using squares, and will respond correctly to the terms "one more" and "more than one."
3-4b	Color 4: Yellow	Script Teacher Booklet Tape and Recorder	Children will identify and label the color yellow.
4-1a	Color 5: Red, Green, Yellow Lotto	Script Lotto Boards Lotto Cards	Children will identify red, green and yellow colored objects and use these color labels in complete sentences.
4-1b	Picture Reading 1	Script Teacher Booklet Tape and Recorder	Children will echo sentences describing one picture and then produce a sentence describing a similar picture.
4-2a	Shapes 1	Script Teacher Booklet Tape and Recorder	Children will identify and label the shapes circle, square and triangle.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
4-2b	Numbers 4: More Than One	Script Student Booklets Tape and Recorder	Children will respond to the term "more than one" by discriminating between one and two objects.
4-3a	Numbers 5: Counting 1-2-3	Script Checkers	Children will count 1-2-3 using checkers.
4-3b	Problem Solving 3: Negation 3	Script Student Booklets Marking Pens Tape and Recorder	Given two pictures, children will respond appropriately to a negative statement.
4-4a	Picture Reading 2	Script Teacher Booklet Tape and Recorder	Children will echo sentences describing one picture and then produce a sentence describing a similar picture.
4-4b	Problem Solving 4: Disjunctive Argument 1	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using disjunctive argument. For example, "One of these girls is named Alice. Alice is not riding a bicycle. Which one is Alice?"
5-1a	Color 6: Color Review: Cars in Garages	Script Colored Cars Colored Strips	Children will identify and name the colors red, yellow and green, and answer questions in complete sentences using these color labels.
5-1b	Shapes 2	Script Teacher Booklet Student Booklets Marking Pens Tape and Recorder	Children will discriminate between the shapes circle, triangle and square.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
5-2a	Numbers 6: More Than Two	Script Student Booklets Tape and Recorder	Children will count 1-2 and will respond to the term "more than two" by discriminating between two and more than two objects.
5-2b	Shapes 3	Script Student Booklets Marking Pens Tape and Recorder	Children will discriminate among the shapes circle, triangle and square when presented in the context of competing stimuli.
5-3a	Picture Reading 3	Script Teacher Booklet Tape and Recorder	Children will echo sentences describing pictures and produce sentences describing similar pictures.
5-3b	Problem Solving 5: Disjunctive Argument 2	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using the disjunctive argument.
5-4a	Numbers 7: Counting 1-2-3, and More Than Two	Script Blocks Student Booklets Tape and Recorder	Children will count 1-2-3 using blocks and will respond to the term "more than two" by discriminating among two and three objects.
5-4b	Picture Reading 4: Lotto	Script Lotto Boards Lotto Cards	Children will identify and match Lotto cards with cells on a Lotto board and describe in complete sentences the content depicted on each Lotto card.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
6-1a	Numbers 8: How Many?	Script	Children will count 1-2 referring to parts of the body and will respond to the question "how many?"
6-1b	Picture Reading 5a	Script Teacher Booklet Tape and Recorder	Children will echo sentences describing similar pictures.
6-2a	Numbers 9: How Many and More Than	Script	Children will respond to the terms "how many" and "more than" by orally producing the correct number.
6-2b	Problem Solving 6: Sequencing 1	Script Teacher Booklet Tape and Recorder	Children will identify and label pictures which are first, middle and last in a series.
6-3a	Picture Reading 5b	Script Teacher Booklet Tape and Recorder	Children will listen to a statement describing a picture and then produce a parallel sentence describing a similar picture.
6-3b	Problem Solving 7: Sequencing 2	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, middle and last in a series.
6-4a	Numbers 10: How Many Fingers?	Script	Children will respond to the question "how many?" by producing the appropriate number and will count 1-2-3-4-5 by showing the correct number of fingers.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
6-4b	Picture Reading 5c	Script Teacher Booklet Blank Tape, Recorder	Children's sentences describing pictures are taped. Each child can then listen to his own speech.
7-1a	Numbers 11: The Three Bears	Script Teacher Booklet Tape and Recorder	Children will identify and label the numerals 1,2,3 and will associate the numeral 3 with three objects.
7-1b	Problem Solving 8: Sequencing 3	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, next and last in a story sequence.
7-2a	Language of Instruction 7: Review of Color Feedback 2	Script Student Booklets Marking Pens Tape and Recorder	Children will discriminate between red and green color feedback.
7-2b	Shapes 4	Script Student Booklets Marking Pens Tape and Recorder	Children will identify shapes circle, triangle and square when embedded in common objects.
7-3a	Numbers 12: Counting 1-5	Script Blocks	Children will count 1-2-3-4-5 using blocks.
7-3b	Problem Solving 9: Sequencing 4	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, next and last in a story sequence.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
7-4a	Numbers 13: Counting 1-5 and How Many	Script Student Booklets Tape and Recorder	Children will count objects depicted in a booklet; will respond to the question "how many?" by producing orally the correct number.
7-4b	Problem Solving 10: Sequencing 5	Script Sets of Picture Cards Sequence Formats	Children will echo a nursery rhyme and will sequence correctly picture cards which illustrate that rhyme.
8-1a	Numbers 14: Numerals 1-5	Script Numeral Cards 1-5	Children will identify and label the numerals 1, 2, 3, 4, 5.
8-1b	Shapes 5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify shapes circle, triangle and square when embedded in common objects.
8-2a	Numbers 15: Numerals 1-5	Script Numeral Cards 1-5	Children will identify and label the numerals 1, 2, 3, 4, 5.
8-2b	Language of Instruction 8: Review of Color Feedback 3	Script Student Booklets Marking Pens Tape and Recorder	Children will discriminate between red and green color feedback.
8-3a	Numbers 16: Numerals 1-5	Script Numeral Cards 1-5	Children will identify and label the numerals 1, 2, 3, 4, 5.
8-3b	Problem Solving 11: Sequencing 6	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, next and last in a story sequence.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
8-4a	Shapes 6	Script Student Booklets Marking Pens Tape and Recorder	Children will identify shapes circle, triangle and square when embedded in common objects.
8-4b	Numbers 17: Simon Says	Script Numeral Cards 1-5 Picture Tags	Children will identify and label the numerals 1, 2, 3, 4, 5 and will select the number of objects associated with each of these numerals.
9-1a	Color 7: Blue	Script Teacher Booklet Tape and Recorder	Children will identify and label the color blue.
9-1b	Numbers 18: Numerals 1-5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label the numerals 1, 2, 3, 4, 5 and will select the number of objects associated with each of these numerals.
9-2a	Color 8: I See Blue	Script Teacher Booklet Tape and Recorder	Children will identify and label the color blue.
9-2b	Problem Solving 12: Sequencing 7	Script Student Booklets Marking Pens Tape and Recorder	Children will identify first, next and last pictures in a story sequence.
9-3a	Color 9: Color Street Game	Script Game Boards Markers, Colored Beads	Children will identify and label colors and select the appropriate colored space on a game board.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
9-3b	Numbers 19: Numerals 1-5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label the numerals 1, 2, 3, 4, 5 and will select the number of objects associated with each of these numerals.
9-4a	Numbers 20: Numerals 1-5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify the numeral (1-5) associated with a given number of objects.
9-4b	Shapes 7: Color and Shape	Script Cards	Children will identify and label colored shapes on cards.
10-1a	Picture Reading 6	Script Teacher Booklet Tape and Recorder	Children will echo and produce descriptive sentences using appropriate prepositions.
10-1b	Numbers 21: Numerals 1-5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify the numeral (1-5) associated with a given number of objects.
10-2a	Home Environment Language 1	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of the floor, roof and walls of a house.
10-2b	Shapes 8: Shape and Number	Script Cards	Children will identify and describe cards with a specific number of shapes.
10-3a	Picture Reading 7	Script Teacher Booklet Tape and Recorder	Children will echo and produce descriptive sentences using appropriate prepositions.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
10-3b	Numbers 22: Four Boys and Four Girls	Script Teacher Booklet Tape and Recorder	Children will identify and label the numerals 1-4 and count the number of objects associated with each numeral.
10-4a	Picture Reading 8	Script Teacher Booklet Tape and Recorder	Children will echo and produce descriptive sentences using appropriate prepositions.
10-4b	Home Environment Language 2	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of the roof, floor, walls, door, window, doorknob and window glass of a house.
11-1a	Home Environment Language 3	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of the roof, floor, door and window of a house.
11-1b	Problem Solving 13: Negation 4	Script Student Booklets Marking Pens Tape and Recorder	Given two pictures, children will respond appropriately to a negative statement.
11-2a	Home Environment Language 4	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of a doorknob, lock and key of a house.
11-2b	Numbers 23: Numeral Identification 1	Script Student Booklets Marking Pens Tape and Recorder	Children will identify, trace and label the numerals 1-3.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
11-3a	Problem Solving 14: Sequencing 8	Script Picture Cards Sequence Formats	Children will echo a nursery rhyme and correctly sequence pictures which illustrate the rhyme.
11-3b	Numbers 24: Numeral Identification 2	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label the numerals 1-5.
11-4a	Problem Solving 15: Disjunctive Argument 3	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using the disjunctive argument.
11-4b	Problem Solving 16: Sequencing 9	Script Picture Cards Sequence Formats	Children will echo a nursery rhyme and correctly sequence pictures which illustrate the rhyme.
12-1a	Picture Reading 9a	Script Teacher Booklet Tape and Recorder	Children will echo descriptive sentences.
12-1b	Home Environment Language 5	Script Teacher Booklet Tape and Recorder	Children will identify and describe different parts of a house.
12-2a	Picture Reading 9b	Script Teacher Booklet Tape and Recorder	Children will listen to a statement describing a picture and then produce a parallel sentence describing a similar picture.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
12-2b	Problem Solving 17: Disjunctive Argument 4	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using the disjunctive argument.
12-3a	Color 10: Fishing Game	Script Magnetic Fishing Pole Fish	Children will identify and label different colored shapes in a fishing game.
12-3b	Home Environment Language 6	Script Student Booklets Marking Pens Tape and Recorder	Children will identify different parts of a house.
12-4a	Numbers 25: Five Candies	Script Teacher Booklet Tape and Recorder	Children will respond appropriately to number concepts (1-5).
12-4b	Picture Reading 9c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to a previously modeled story.

** END OF SEMESTER 1 ***

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
1-1a	Color 11: Purple	Script Teacher Booklet Red and Blue Paddles Tape and Recorder	Children will produce, identify, and label the color purple.
1-1b	Problem Solving 18: Sequencing 10	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, next, and last in a story sequence.
1-2a	Picture Reading 10a	Script Teacher Booklet Tape and Recorder	Children will echo descriptive sentences.
1-2b	Problem Solving 19: Sequencing 11	Script Sets of Picture Cards Sequence Formats	Children will echo a nursery rhyme and correctly sequence pictures which illustrate the rhyme.
1-3a	Picture Reading 10b	Script Teacher Booklet Tape and Recorder	Children will listen to a statement describing a picture and then produce a parallel sentence describing a similar picture.
1-3b	Color 12: Color and Numeral Lotto	Script Sets of Lotto Cards Lotto Boards	Children will identify and match cards with colored numerals with the appropriate cells on a lotto board.
1-4a	Numbers 26: Numeral Identification 3	Script Student Booklets Marking Pens Tape and Recorder	Children will identify, trace, and label the numerals 1-5.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
1-4b	Picture Reading 10c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story and listen to their own speech.
2-1a	Letter Recognition 1: Alphabet Song	Script Alphabet Boards Tape and Recorder	Children will repeat lower case letters of the alphabet in traditional alphabet song.
2-1b	Animal Homes 1	Script Teacher Booklet Tape and Recorder	Children will identify animals and their homes (bird, squirrel, mouse).
2-2a	Letter Recognition 2: a-j	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and name lower case letters a to j.
2-2b	Problem Solving 20: Joint Denial 1	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using logical operation of joint denial. For example, "Mark the picture that is not a boy and not a girl."
2-3a	Color 13: Orange	Script Teacher Booklet Red and Yellow Paddles Tape and Recorder	Children will identify and label the color orange.
2-3b	Letter Recognition 3: d-o	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters d-o.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
2-4a	Visual Discrimination 1	Script Teacher Booklet Tape and Recorder	Children will identify pictures that are the same and not the same.
2-4b	Letter Recognition 4: Alphabet Card Game a-o	Script Alphabet Cards (a-o)	Children will identify and label lower case letters a-o.
3-1a	Picture Reading 11a	Script Teacher Booklet Tape and Recorder	Children will echo descriptive sentences.
3-1b	Letter Recognition 5: f-t	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and name lower case letters of the alphabet (f-t).
3-2a	Picture Reading 11b	Script Teacher Booklet Tape and Recorder	Children will listen to a statement describing a picture and then produce a parallel sentence describing a similar picture.
3-2b	Letter Recognition 6: l-z	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters of the alphabet (l-z).
3-3a	Visual Discrimination 3	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures that are the same or not the same.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
3-3b	Picture Reading 11c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story and listen to their own speech.
3-4a	Animal Homes 2	Script Teacher Booklet Tape and Recorder	Children will identify and label animals and their homes (beaver, duck, fish).
3-4b	Letter Recognition 7: Alphabet Card Game a-z	Script Alphabet Cards a-z	Children will identify and label lower case letters of the alphabet.
4-1a	Home Environment Language 7	Script Teacher Booklet Tape and Recorder	Children will identify and label different parts of a house and different pieces of furniture.
4-1b	Letter Recognition 8: Spelling t, o	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label two lower case letters. Children will also spell and say a two-letter word.
4-2a	Animal Homes 3	Script Teacher Booklet Tape and Recorder	Children will identify and label animals and their homes.
4-2b	Letter Recognition 9: Spelling p, o, t	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label three lower case letters. Children will also spell and say two three-letter words.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
4-3a	Problem Solving 21: Categories 1	Script Teacher Booklet Sets of Sorting Cards Clue Cards Tape and Recorder	Children will identify, label and sort pictures of animals and toys into appropriate categories.
4-3b	Visual Discrimination 3	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures that are the same and not the same.
4-4a	Problem Solving 22: Categories 2	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label instances of the categories, animals and toys.
4-4b	Color 14: Color and Shape Lotto	Script Lotto Boards Set of Lotto Cards	Children will identify, label and match pictures of colored shapes with corresponding cells on a lotto board.
5-1a	Letter Recognition 10: a-m	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters of the alphabet. (a-m)
5-1b	Visual Discrimination 4	Script Sets of Picture Cards	Children will identify objects on picture cards which are the same and not the same.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
5-2a	Animal Homes 4	Script Student Booklets Marking Pens Tape and Recorder	Children will identify animals and their homes.
5-2b	Letter Recognition 11: n-z	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters of the alphabet (n-z).
5-3a	Numbers 27: Numeral Identification 4	Script Student Booklets Marking Pens Tape and Recorder	Given pictures of 1 to 5 objects, children will identify the numeral that tells how many.
5-3b	Problem Solving 23: Categories 3	Script Teacher Booklet Sets of Sorting Cards Tape and Recorder	Children will identify, label and sort pictures of animals, toys and food into appropriate categories.
5-4a	Numbers 28: Set Identification	Script Student Booklets Marking Pens Tape and Recorder	Given a numeral 1-5, children will identify the set with that many objects.
5-4b	Problem Solving 24: Sequencing 12	Script Student Booklets Marking Pens Tape and Recorder	Children will identify first, next and last pictures of a story in sequence.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
6-1a	Visual Discrimination 5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures that are the same and not the same.
6-1b	Letter Recognition 12: Spelling s, n	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label two lower case letters. Children will also spell and say six simple words.
6-2a	Family Relationships 1	Script Teacher Booklet Tape and Recorder	Children will identify a human and a turtle family and develop the concept of a family unit and its function.
6-2b	Letter Recognition 13: p, o, t, s, n	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters; identify, label and spell simple words.
6-3a	Family Relationships 2	Script Teacher Booklet Tape and Recorder	Children will identify a turtle family and develop the concept of a family unit and its function.
6-3b	Problem Solving 25: Categories 4	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label instances of the categories: food, animals, and toys.
6-4a	Problem Solving 26: Joint Denial 2	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using joint denial. For example, "mark the picture that is not a boy and not a girl."

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
6-4b	Color 15: Simon Says	Script Colored tags attached to strings	Children will identify and label six different colors.
7-1a	Problem Solving 27: Categories 5	Script Teacher Booklet Tape and Recorder	Children will identify and label instances of the categories: clothing, food, animals and toys.
7-1b	Letter Recognition 14: Spelling h, e	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label two lower case letters. Children will also spell and say six simple words.
7-2a	Picture Reading 12a: Family Relationships 3a	Script Teacher Booklet Tape and Recorder	Children will echo sentences of a parallel story about a turtle family and a bird family.
7-2b	Letter Recognition 15: p, s, n, h, e	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters. Children will also identify, label and spell simple words.
7-3a	Picture Reading 12b: Family Relationships 3b	Script Teacher Booklet Tape and Recorder	Children will listen to statements about a turtle family and produce statements about a bird family.
7-3b	Problem Solving 28: Sequencing 13	Script Student Booklets Marking Pens Tape and Recorder	Children will identify first, next and last pictures of a story in sequence.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
7-4a	Numbers 29: Simon Says	Script Numeral and Toy Tags Animal and Numeral Cards	Children will identify and label numerals 1-5 and the number of objects associated with each numeral.
7-4b	Picture Reading 12c: Family Relationships 3c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story and listen to their speech.
8-1a	Numbers 30: More Than and Same Number	Script Sets of 5 Squares	Children will appropriately use the terms "more than" and "same number" to describe sets of objects.
8-1b	Letter Recognition 16: Spelling a, m	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label two lower case letters. Children will also spell and say six simple words.
8-2a	Problem Solving 29: Sequencing 14	Script Student Booklets Marking Pens Tape and Recorder	Children will describe a four-picture story sequence and identify missing pictures in the sequence.
8-2b	Letter Recognition 17: m, a, s, h, e	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters. Children will also identify, label, and spell simple words.
8-3a	Family Relationships 4	Script Teacher Booklet Tape and Recorder	Children will identify different animal families and develop the concept of a family unit and its function.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
8-3b	Problem Solving 30: Categories 6	Script Student Booklets Marking Pens Tape and Recorder	Children will identify, label, and match instances of food, clothing, animals, and toys with their appropriate category.
8-4a	Problem Solving 31: Sequencing 15	Script Student Booklets Marking Pens Tape and Recorder	Children will produce a four-picture story sequence and identify missing pictures in the sequence.
8-4b	Visual Discrimination 6	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures that are the same and not the same.
9-1a	Picture Reading 13a	Script Teacher Booklet Tape and Recorder	Children will echo sentences, changing proper nouns to pronouns.
9-1b	Visual Discrimination 7	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters that are the same and not the same.
9-2a	Picture Reading 13b	Script Teacher Booklet Tape and Recorder	Given a statement describing a picture, children will perform noun-pronoun transformations.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
9-2b	Problem Solving 32: Sequencing 16	Script Student Booklets Marking Pens Tape and Recorder	Children will describe a four-picture story sequence and identify missing pictures in the sequence.
9-3a	Picture Reading 13c	Script Teacher Booklet Tape and Recorder	Given a statement describing one picture, children will produce a statement describing a parallel picture.
9-3b	Numbers 31: More Than and Same Number	Script Student Booklets Marking Pens Tape and Recorder	Children will select sets with the same number of objects, or with more objects than another set.
9-4a	Opposites 1	Script Teacher Booklet Tape and Recorder	Given a word with a polar opposite, children will name the word and its opposite.
9-4b	Numbers 32: Numeral Identification 5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label numerals 1-5.
10-1a	Letter Recognition 18: Spelling c, i	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label two lower case letters. Children will also spell and say six simple words.
10-1b	Shapes 9	Script Student Booklets, Pens Tape and Recorder	Children will identify shapes: circle, triangle, and square.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
10-2a	Opposites 2	Script Teacher Booklet Tape and Recorder	Given a word with a polar opposite, children will name the word and its opposite.
10-2b	Letter Recognition 19: e, a, m, c, i	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters. Children will also identify, label, and spell simple words.
10-3a	Visual Discrimination 8	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters that are the same and not the same.
10-3b	Letter Recognition 20: Alphabet Card Game a-z	Script 2 Sets of Alphabet Cards	Children will identify and label lower case letters of the alphabet.
10-4a	Family Relationships 5	Script Teacher Booklet Tape and Recorder	Children will describe the life of a robin family.
10-4b	Visual Discrimination 9	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters that are the same and not the same.
11-1a	Opposites 3	Script Teacher Booklet Tape and Recorder	Given a word with a polar opposite, children will name the word and its opposite.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
11-1b	Letter Recognition 21: a-m	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters.
11-2a	Picture Reading 14a	Script Teacher Booklet Tape and Recorder	Children will echo sentences.
11-2b	Letter Recognition 22: n-z	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters.
11-3a	Picture Reading 14b	Script Teacher Booklet Tape and Recorder	Given a statement describing a picture, children will produce a sentence describing a similar picture.
11-3b	Numbers 33: Same Number, More Than, Less Than	Script Student Booklets Marking Pens Tape and Recorder	Children will identify a set of objects which contains the same number, more than or less than another set of objects.
11-4a	Family Relationships 6	Script Teacher Booklet Tape and Recorder	Children will develop the concept of perpetuation of a species and distinguish between egg layers and non-egg layers.
11-4b	Picture Reading 14c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story and listen to their own recorded speech.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
12-1a	Family Relationships 7	Script Teacher Booklet Tape and Recorder	Children will describe the life of a human family and develop the concept of birth and perpetuation.
12-1b	Letter Recognition 23: p, o, t, s, n, h	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters and simple words.
12-2a	Family Relationships 8	Script Teacher Booklet Sets of Picture Cards	Children will describe and sequence the growth of a human being from birth to preschool age.
12-2b	Letter Recognition 24: e, a, m, c, i	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters and simple words.
12-3a	Family Relationships 9	Script Student Booklets Marking Pens Tape and Recorder	Children will identify different animal families.
12-3b	Numbers 34: Same Number, More than and Less Than	Script Student Booklets Marking Pens Tape and Recorder	Children will identify a set of objects which contains the same number, more than or less than another set of objects.

UCLA PRESCHOOL LANGUAGE PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
12-4a	Opposites 4	Script Student Booklets Marking Pens Tape and Recorder	Given a word with a polar opposite, children will say its opposite and identify a picture representing the opposite.
12-4b	Problem Solving 33: Sequencing 17	Script Student Booklets Marking Pens Tape and Recorder	Children will describe a four-picture story sequence and identify missing pictures in the sequence.

** END OF SEMESTER 2 ***

Part 2. Categories of Content for the Instructional Activities for Two Semesters of the Preschool Language Program. The categories are:

- A. Language of Instruction
- B. Colors
- C. Picture Reading
- D. Numbers
- E. Shapes
- F. Home Environment Language
- G. Animal Homes
- H. Letter Recognition
- I. Visual Discrimination
- J. Opposites
- K. Family Relationships
- L. Problem Solving
    - I. Negation
    - II. Sequencing
    - III. Disjunctive Argument
    - IV. Joint Denial
    - V. Categories

UCLA PRESCHOOL LANGUAGE PROGRAM

A. LANGUAGE OF INSTRUCTION: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
1-1	Language of Instruction 1	Script Listening Game: Noise makers and pictures of those objects	Children will attend, listen, label objects and pictures of objects, and transfer from three-dimensional objects to pictures of those objects.
		Teacher Booklet	Children will identify and label pictures of objects; echo sentences describing different pictures.
1-2	Language of Instruction 2	Script Listening Game: (Same as 1-1)	(Same as 1-1)
		Teacher Booklet	Children will identify and label pictures of objects. Given a statement about a picture, children will produce a parallel sentence for a similar picture.
1-3	Language of Instruction 3	Script Listening Game: (Same as 1-1)	(Same as 1-1)
		Teacher Booklet	Children will identify and label pictures of objects; echo sentences; when shown pictures, will produce sentences to describe them.
2-4	Language of Instruction 4: Color Feedback 1	Script Teacher Booklet Student Booklets Marking Pens	Children will identify and label the colors red and green, turn pages in a booklet, mark spots under pictures to get red and green color feedback.

A. LANGUAGE OF INSTRUCTION: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
2-4a	Language of Instruction 4 (Continued)	Bell	A green spot tells the child he selected the correct picture; red tells him to mark again.
3-1b	Language of Instruction 5: Booklet Instructions	Script Teacher Booklet Student Booklets Teacher Picture Marking Pens, Bell	(Same as 2-4)
3-2a	Language of Instruction 6: Review of Color Feedback 1	Script Teacher Picture Student Booklets Marking Pens Tape and Recorder	Children will listen to taped instructions and discriminate between red and green color feedback. Green tells the child he selected the correct picture; red tells him to mark again.
7-2a	Language of Instruction 7: Review of Color Feedback 2	Script Student Booklets Marking Pens Tape and Recorder	Children will discriminate between red and green color feedback.
8-2b	Language of Instruction 8: Review of Color Feedback 3	Script Student Booklets Marking Pens Tape and Recorder	Children will discriminate between red and green color feedback.

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B. COLOR: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
2-1	Color 1: Green	Script Teacher Booklet Tape and Recorder	Children will identify and label the color green.

B. COLOR: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
2-2	Color 2: Red	Script Teacher Booklet Tape and Recorder	Children will identify and label the color red.
2-3	Color 3: Red and Green	Script Teacher Booklet	Children will identify and label the colors red and green.
3-4b	Color 4: Yellow	Script Teacher Booklet Tape and Recorder	Children will identify and label the color yellow.
4-1a	Color 5: Red, Green, Yellow Lotto	Script Lotto Boards Lotto Cards	Children will identify red, green and yellow colored objects and use these color labels in complete sentences.
5-1a	Color 6: Color Review: Cars in Garages	Script Colored Cars Colored Strips	Children will identify and name the colors red, yellow and green, and answer questions in complete sentences using these color labels.
9-1a	Color 7: Blue	Script Teacher Booklet Tape and Recorder	Children will identify and label the color blue.
9-2a	Color 8: I See Blue	Script Teacher Booklet Tape and Recorder	Children will identify and label the color blue.
9-3a	Color 9: Color Street Game	Script Game Boards Markers, Colored Beads	Children will identify and label colors and select the appropriate colored space on a game board.

B. COLOR: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
12-3a	Color 10: Fishing Game	Script Magnetic Fishing Pole Fish	Children will identify and label different colored shapes in a fishing game.

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B. COLOR: SEMESTER 2

1-1a	Color 11: Purple	Script Teacher Booklet Red and Blue Paddles Tape and Recorder	Children will produce, identify and label the color purple.
1-3b	Color 12: Color and Numeral Lotto	Script Lotto Boards Lotto Cards	Children will identify and match colored numeral cards with the appropriate cells on a lotto board.
2-3a	Color 13: Orange	Script Teacher Booklet Red and Yellow Paddles Tape and Recorder	Children will identify and label the color yellow.
4-4b	Color 14: Color and Shape Lotto	Script Lotto Boards Lotto Cards	Children will identify, label and match pictures of colored shapes with corresponding cells on a lotto board.
6-4b	Color 15: Simon Says	Script Colored Tags on Strings	Children will identify and label six different colors.

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C. PICTURE READING: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
4-1b	Picture Reading 1	Script Teacher Booklet Tape and Recorder	Children will echo sentences describing one picture and then produce a sentence describing a similar picture.
4-4a	Picture Reading 2	(Same as 4-1b)	(Same as 4-1b)
5-3a	Picture Reading 3	(Same as 4-1b)	(Same as 4-1b)
5-4b	Picture Reading 4: Lotto	Script Lotto Boards Lotto Cards	Children will identify and match lotto cards with cells on a lotto board and describe in complete sentences the content depicted on each lotto card.
6-1b	Picture Reading 5a	Script Teacher Booklet Tape and Recorder	Children will echo sentences describing similar pictures.
6-3a	Picture Reading 5b	Script Teacher Booklet Tape and Recorder	Children will listen to a statement describing a picture and then produce a parallel sentence describing a similar picture.
6-4b	Picture Reading 5c	Script Teacher Booklet Blank Tape, Recorder	Children's sentences describing pictures are taped. Each child can then listen to his own speech.
10-1a	Picture Reading 6	Script Teacher Booklet Tape and Recorder	Children will echo and produce descriptive sentences using appropriate prepositions.
10-3a	Picture Reading 7	(Same as 10-1a)	(Same as 10-1a)

C. PICTURE READING: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
10-4a	Picture Reading 8	Script Teacher Booklet Tape and Recorder	Children will echo and produce descriptive sentences using appropriate prepositions.
12-1a	Picture Reading 9a	Script Teacher Booklet Tape and Recorder	Children will echo descriptive sentences.
12-2a	Picture Reading 9b	Script Teacher Booklet Tape and Recorder	Children will listen to a statement describing a picture and then produce a parallel sentence describing a similar picture.
12-4b	Picture Reading 9c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story.

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C. PICTURE READING: SEMESTER 2

1-2a	Picture Reading 10a	Script Teacher Booklet Tape and Recorder	Children will echo descriptive sentences.
1-3a	Picture Reading 10b	Script Teacher Booklet Tape and Recorder	Children will listen to a statement describing a picture and then produce a parallel sentence describing a similar picture.
1-4b	Picture Reading 10c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story and listen to their own speech.

C. PICTURE READING: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
3-1a	Picture Reading 11a	(Same as 1-2a)	(Same as 1-2a)
3-2a	Picture Reading 11b	(Same as 1-3a)	(Same as 1-3a)
3-3b	Picture Reading 11c	(Same as 1-4b)	(Same as 1-4b)
7-2a	Picture Reading 12a: Family Relationships 3a	Script Teacher Booklet Tape and Recorder	Children will echo sentences of a parallel story about a turtle family and a bird family.
7-3a	Picture Reading 12b: Family Relationships 3b	Script Teacher Booklet Tape and Recorder	Children will listen to statements about a turtle family and produce statements about a bird family.
7-4b	Picture Reading 12c: Family Relationships 3c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story and listen to their own speech.
9-1a	Picture Reading 13a	Script Teacher Booklet Tape and Recorder	Children will echo sentences, changing proper nouns to pronouns.
9-2a	Picture Reading 13b	Script Teacher Booklet Tape and Recorder	Given a statement describing a picture, children will produce noun-pronoun transformations.
9-3a	Picture Reading 13c	Script Teacher Booklet Tape and Recorder	Given a statement describing one picture, children will produce a statement describing a parallel picture.

C. PICTURE READING: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
11-2a	Picture Reading 14a	Script Teacher Booklet Tape and Recorder	Children will echo sentences.
11-3a	Picture Reading 14b	Script Teacher Booklet Tape and Recorder	Given a statement describing a picture, children will produce a sentence describing a similar picture.
11-4b	Picture Reading 14c	Script Teacher Booklet Blank Tape, Recorder	Children will produce sentences to previously modeled story and listen to their own recorded speech.

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D. NUMBERS: SEMESTER 1

3-1a	Numbers 1: Introduction	Script	Children will count 1-2 referring to different parts of their bodies (e.g., nose, eyes, ears).
3-3a	Numbers 2: Counting 1-2	Script Box of Blocks	Children will count 1-2 using blocks.
3-4a	Numbers 3: More Than One	Script Cardboard Squares	Children will count 1-2 using squares, and will respond correctly to the terms "one more" and "more than one."
4-2b	Numbers 4: More Than One	Script Student Booklets Tape and Recorder	Children will respond to the term "more than one" by discriminating between one object and two objects.
4-3a	Numbers 5: Counting 1-2-3	Script Box of Checkers	Children will count 1-2-3 using checkers.

D. NUMBERS: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
5-2a	Numbers 6: More Than Two	Script Student Booklets Tape and Recorder	Children will count 1-2 and will respond to the term "more than two" by discriminating between two and more than two objects.
5-4a	Numbers 7: Counting 1-2-3 and More Than Two	Script Blocks Student Booklets Tape and Recorder	Children will count 1-2-3 using blocks and will respond to the term "more than two" by discriminating among two and three objects.
6-1a	Numbers 8: How Many?	Script	Children will count 1-2 referring to parts of the body and will respond to the question "how many?"
6-2a	Numbers 9: How Many and More Than	Script	Children will respond to the terms "how many" and "more than" by orally producing the correct number.
6-4a	Numbers 10: How Many Fingers?	Script	Children will respond to the question "how many?" by producing the appropriate number and will count 1-2-3-4-5 by showing the correct number of fingers.
7-1a	Numbers 11: The Three Bears	Script Teacher Booklet Tape and Recorder	Children will identify and label the numerals 1, 2, 3, and will associate the number 3 with three objects.
7-3a	Numbers 12: Counting 1-5	Script Blocks	Children will count 1-2-3-4-5 using blocks.

D. NUMBERS: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
7-4a	Numbers 13: Counting 1-5, and How Many	Script Teacher Booklet Student Booklets Tape and Recorder	Children will count objects depicted in a booklet and will respond to the question "how many?" by producing orally the correct number.
8-1a	Numbers 14: Numerals 1-5	Script Numeral Cards	Children will identify and label the numerals 1, 2, 3, 4, 5.
8-2a	Numbers 15: Numerals 1-5	(Same as 8-1a)	(Same as 8-1a)
8-3a	Numbers 16: Numerals 1-5	(Same as 8-1a)	(Same as 8-1a)
8-4b	Numbers 17: Simon Says	Script Numeral Cards Picture Tags	Children will identify and label the numerals 1, 2, 3, 4, 5 and will select the number of objects associated with each of these numerals.
9-1b	Numbers 18: Numerals 1-5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label the numerals 1, 2, 3, 4, 5 and select the the number of objects associated with each of these numerals.
9-3b	Numbers 19: Numerals 1-5	(Same as 9-1b)	(Same as 9-1b)
9-4a	Numbers 20: Numerals 1-5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify the numeral (1-5) associated with a given number of objects.
10-1b	Numbers 21: Numerals 1-5	(Same as 9-4a)	(Same as 9-4a)

D. NUMBERS: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
10-3b	Numbers 22: Four Boys and Four Girls	Script Teacher Booklet Tape and Recorder	Children will identify and label the numerals 1-4 and count the number of objects associated with each numeral.
11-2b	Numbers 23: Numeral Identification 1	Script Student Booklets	Children will identify, trace and label the numerals 1-3.
11-3b	Numbers 24: Numeral Identification 2	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label the numerals 1-5.
12-4a	Numbers 25: Five Candies	Script Teacher Booklet Tape and Recorder	Children will respond appropriately to number concepts (1-5).

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D. NUMBERS: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
1-4a	Numbers 26: Numeral Identification 3	Script Student Booklets Marking Pens Tape and Recorder	Children will identify, trace and label the numerals 1-5.
5-3a	Numbers 27: Numeral Identification 4	Script Student Booklets Marking Pens Tape and Recorder	Given pictures of 1 to 5 objects, children will identify the numeral that tells how many.
5-4a	Numbers 28: Set Identification	Script Student Booklets Marking Pens Tape and Recorder	Given a numeral 1-5, children will identify the set with that many objects.

D. NUMBERS: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
7-4a	Numbers 29: Simon Says	Script Numeral, Toy Tags Animal, Numeral Cards	Children will identify and label numerals 1-5 and the number of objects associated with each numeral.
8-1a	Numbers 30: More Than and Same Number	Script Squares	Children will appropriately use the terms "more than" and "same number" to describe sets of objects.
9-3b	Numbers 31: More Than and Same Number	Script Student Booklets Marking Pens Tape and Recorder	Children will select sets with the same number of objects or with more objects than another set.
9-4b	Numbers 32: Numeral Identification 5	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label numerals 1-5.
11-3b	Numbers 33: Same Number, More Than and Less Than	Script Student Booklets Marking Pens Tape and Recorder	Children will identify a set of objects which contains the same number, more than or less than another set of objects.
12-3b	Numbers 34: Same Number, More Than and Less Than	(Same as 11-3b)	(Same as 11-3b)

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E. SHAPES: SEMESTER 1

4-2a	Shapes 1	Script Teacher Booklet Tape and Recorder	Children will identify and label the shapes circle, square and triangle.

E. SHAPES: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
5-1b	Shapes 2	Script Teacher Booklet Student Booklets Marking Pens Tape and Recorder	Children will discriminate among the shapes circle, triangle and square.
5-2b	Shapes 3	Script Student Booklets Marking Pens Tape and Recorder	Children will discriminate among the shapes circle, triangle and square when presented in the context of competing stimuli.
7-2b	Shapes 4	Script Student Booklets Marking Pens Tape and Recorder	Children will identify the shapes circle, triangle and square when embedded in common objects.
8-1b	Shapes 5	(Same as 7-2b)	(Same as 7-2b)
8-4a	Shapes 6	(Same as 7-2b)	(Same as 7-2b)
9-4b	Shapes 7: Color and Shape	Script Cards	Children will identify and label colored shapes on cards.
10-2b	Shapes 8: Shape and Number	Script Cards	Children will identify and describe cards with specific number of shapes.

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E. SHAPES: SEMESTER 2

10-1b	Shapes 9	Script Student Booklets Marking Pens Tape and Recorder	Children will identify the shapes circle, triangle and square.

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F. HOME ENVIRONMENT LANGUAGE: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
10-2a	Home Environment Language 1	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of the floor, roof and walls of a house.
10-4b	Home Environment Language 2	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of the roof, floor, walls, door, window, doorknob and window glass of a house.
11-1a	Home Environment Language 3	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of the roof, floor, door and window of a house.
11-2a	Home Environment Language 4	Script Teacher Booklet Tape and Recorder	Children will identify and describe the functions of a doorknob, lock and key of a house.
12-1b	Home Environment Language 5	Script Teacher Booklet	Children will identify and describe different parts of a house.
12-3b	Home Environment Language 6	Script Student Booklets Marking Pens Tape and Recorder	Children will identify different parts of a house.

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F. HOME ENVIRONMENT LANGUAGE: SEMESTER 2

4-1a	Home Environment Language 7	Script Teacher Booklet Tape and Recorder	Children will identify and label parts of a house and different pieces of furniture.

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G. ANIMAL HOMES: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
2-1b	Animal Homes 1	Script Teacher Booklet Tape and Recorder	Children will identify animals and their homes (bird, squirrel, mouse).
3-4a	Animal Homes 2	Script Teacher Booklet Tape and Recorder	Children will identify and label animals and their homes (beaver, duck, fish).
4-2a	Animal Homes 3	Script Teacher Booklet Tape and Recorder	Children will identify and label animals and their homes.
5-2a	Animal Homes 4	Script Student Booklets Marking Pens Tape and Recorder	Children will identify animals and their homes.

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H. LETTER RECOGNITION: SEMESTER 2

2-1a	Letter Recognition 1: Alphabet Song	Script Alphabet Boards Tape and Recorder	Children will repeat lower case letters of the alphabet in traditional alphabet song.
2-2a	Letter Recognition 2: a-j	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and name lower case letters a to j.
2-3b	Letter Recognition 3: d-o	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters d to o.

H. LETTER RECOGNITION: SEMESTER 2

Week-Day	Name of Program	Materials	Instuctional Objectives
2-4b	Letter Recognition 4: Alphabet Card Game a-o	Script Alphabet Cards a-o	Children will identify and label lower case letters a to o.
3-1b	Letter Recognition 5: f-t	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and name lower case letters f to t.
3-2b	Letter Recognition 6: l-z	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters l to z.
3-4b	Letter Recognition 7: Alphabet Card Game a-z	Script Alphabet Cards a-z	Children will identify and label lower case letters of the alphabet.
4-1b	Letter Recognition 8: Spelling t, o	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label two lower case letters. Children will also spell and say a two-letter word.
4-2b	Letter Recognition 9: Spelling p, o, t	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label three lower case letters. Children will also spell and say two three-letter words.
5-1a	Letter Recognition 10: a-m	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters of the alphabet.
5-2a	Letter Recognition 11: n-z	(Same as 5-1a)	(Same as 5-1a)

H. LETTER RECOGNITION: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
6-1b	Letter Recognition 12: Spelling s, n	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label two lower case letters. Children will spell and say six simple words.
6-2b	Letter Recognition 13: p, o, t, s, n	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters. Children will identify, label and spell six simple words.
7-1b	Letter Recognition 14: Spelling h, e	(Same as 6-1b)	(Same as 6-1b)
7-2b	Letter Recognition 15: p, s, n, h, e	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters. Children will identify, label and spell simple words.
8-1b	Letter Recognition 16: Spelling a, m	(Same as 6-1b)	(Same as 6-1b)
8-2b	Letter Recognition 17: m, a, s, h, e	(Same as 7-2b)	(Same as 7-2b)
10-1a	Letter Recognition 18: Spelling c, i	(Same as 6-1b)	(Same as 6-1b)
10-2b	Letter Recognition 19: e, a, m, c, i	(Same as 7-2b)	(Same as 7-2b)
10-3b	Letter Recognition 20: Alphabet Card Game a-z	Script Alphabet Cards a-z	Children will identify and label lower case letters of the alphabet.

H. LETTER RECOGNITION: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
11-1b	Letter Recognition 21: a-m	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label lower case letters.
11-2b	Letter Recognition 22: n-z	(Same as 11-1b)	(Same as 11-1b)
12-1b	Letter Recognition 23: p, o, t, s, n, h	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters and simple words.
12-2b	Letter Recognition 24: e, a, m, c, i	(Same as 12-1b)	(Same as 12-1b)

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I. VISUAL DISCRIMINATION: SEMESTER 2

2-4a	Visual Discrimination 1	Script Teacher Booklet Tape and Recorder	Children will identify pictures that are the same and not the same.
3-3a	Visual Discrimination 2	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures that are the same or not the same.
4-3b	Visual Discrimination 3	(Same as 3-3a)	(Same as 3-3a)
5-1b	Visual Discrimination 4	Script Cards	Children will identify objects on picture cards which are the same and not the same.

I. VISUAL DISCRIMINATION: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
6-1a	Visual Discrimination 5	(Same as 3-3a)	(Same as 3-3a)
8-4b	Visual Discrimination 6	(Same as 3-3a)	(Same as 3-3a)
9-1b	Visual Discrimination 7	Script Student Booklets Marking Pens Tape and Recorder	Children will identify lower case letters that are the same and not the same.
10-3a	Visual Discrimination 8	(Same as 9-1b)	(Same as 9-1b)
10-4b	Visual Discrimination 9	(Same as 9-1b)	(Same as 9-1b)

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J. OPPOSITES: SEMESTER 2

9-4a	Opposites 1	Script Teacher Booklet Tape and Recorder	Given a word with a polar opposite, children will name the word and its opposite.
10-2a	Opposites 2	(Same as 9-4a)	(Same as 9-4a)
11-1a	Opposites 3	(Same as 9-4a)	(Same as 9-4a)
12-4a	Opposites 4	Script Student Booklets Marking Pens Tape and Recorder	Given a word with a polar opposite, children will say its opposite and identify a picture representing the opposite.

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K. FAMILY RELATIONSHIPS: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
6-2a	Family Relationships 1	Script Teacher Booklet Tape and Recorder	Children will identify a human and a turtle family and develop the concept of a family unit and its function.
6-3a	Family Relationships 2	Script Teacher Booklet Tape and Recorder	Children will identify a turtle family and develop the concept of a family unit and its function.
7-2a	Family Relationships 3a	(See Picture Reading 12a)	
7-3a	Family Relationships 3b	(See Picture Reading 12b)	
7-4b	Family Relationships 3c	(See Picture Reading 12c)	
8-3a	Family Relationships 4	Script Teacher Booklet Tape and Recorder	Children will identify different animal families and develop the concept of a family unit and its function.
10-4a	Family Relationships 5	Script Teacher Booklet Tape and Recorder	Children will describe the life of a robin family.
11-4a	Family Relationships 6	Script Teacher Booklet Tape and Recorder	Children will develop the concept of a perpetuation of a species and distinguish between egg-layers and non-egg-layers.
12-1a	Family Relationships 7	Script Teacher Booklet Tape and Recorder	Children will describe the life of a human family and develop the concept of birth and perpetuation.

K. FAMILY RELATIONSHIPS: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
12-2a	Family Relationships 8	Script Teacher Booklet Picture Cards Tape and Recorder	Children will describe and sequence the growth of a human being from birth to preschool age.
12-3a	Family Relationships 9	Script Student Booklets Marking Pens Tape and Recorder	Children will identify different animal families.

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L. PROBLEM SOLVING I: NEGATION: SEMESTER 1

3-2b	Problem Solving 1: Negation 1	Script Student Booklets Marking Pens Tape and Recorder	Given two pictures, children will respond appropriately to a negative statement.
3-3b	Problem Solving 2: Negation 2	(Same as 3-2b)	(Same as 3-2b)
4-3b	Problem Solving 3: Negation 3	(Same as 3-2b)	(Same as 3-2b)
11-1b	Problem Solving 13: Negation 4	(Same as 3-2b)	(Same as 3-2b)

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L. PROBLEM SOLVING II: SEQUENCING: SEMESTER 1

6-2b	Problem Solving 6: Sequencing 1	Script Teacher Booklet Tape and Recorder	Children will identify and label pictures which are first, middle, and last in a series.

L. PROBLEM SOLVING II: SEQUENCING: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
6-3b	Problem Solving 7: Sequencing 2	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, middle and last in a series.
7-1b	Problem Solving 8: Sequencing 3	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, next and last in a story sequence.
7-3b	Problem Solving 9: Sequencing 4	(Same as 7-1b)	(Same as 7-1b)
7-4b	Problem Solving 10: Sequencing 5	Script Picture Cards Sequence Formats	Children will echo a nursery rhyme and correctly sequence picture cards which illustrate that rhyme.
8-3b	Problem Solving 11: Sequencing 6	(Same as 7-1b)	(Same as 7-1b)
9-2b	Problem Solving 12: Sequencing 7	(Same as 7-1b)	(Same as 7-1b)
11-3a	Problem Solving 14: Sequencing 8	(Same as 7-4b)	(Same as 7-4b)
11-4b	Problem Solving 16: Sequencing 9	(Same as 7-4b)	(Same as 7-4b)

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L. PROBLEM SOLVING II: SEQUENCING: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
1-1b	Problem Solving 18: Sequencing 10	Script Student Booklets Marking Pens Tape and Recorder	Children will identify pictures which are first, next, and last in a story sequence.
1-2b	Problem Solving 19: Sequencing 11	Script Picture Cards Sequence Formats	Children will echo a nursery rhyme and correctly sequence pictures which illustrate the rhyme.
5-4b	Problem Solving 24: Sequencing 12	(Same as 1-1b)	(Same as 1-1b)
7-3b	Problem Solving 28: Sequencing 13	(Same as 1-1b)	(Same as 1-1b)
8-2a	Problem Solving 29: Sequencing 14	Script Student Booklets Marking Pens Tape and Recorder	Children will describe a four-picture story sequence and identify missing pictures in the sequence.
8-4a	Problem Solving 31: Sequencing 15	(Same as 8-2a)	(Same as 8-2a)
9-2b	Problem Solving 32: Sequencing 16	(Same as 8-2a)	(Same as 8-2a)
12-4b	Problem Solving 33: Sequencing 17	(Same as 8-2a)	(Same as 8-2a)

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L. PROBLEM SOLVING III: DISJUNCTIVE ARGUMENT: SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
4-4b	Problem Solving 4: Disjunctive Argument 1	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using disjunctive argument. For example, "One of these girls is named Alice. Alice is not riding a bicycle. Which one is Alice?"
5-3b	Problem Solving 5: Disjunctive Argument 2	(Same as 4-4b)	(Same as 4-4b)
11-4a	Problem Solving 15: Disjunctive Argument 3	(Same as 4-4b)	(Same as 4-4b)
12-2b	Problem Solving 17: Disjunctive Argument 4	(Same as 4-4b)	(Same as 4-4b)

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L. PROBLEM SOLVING IV: JOINT DENIAL: SEMESTER 2

2-2b	Problem Solving 20: Joint Denial 1	Script Student Booklets Marking Pens Tape and Recorder	Children will select pictures using logical operation of joint denial. For example, "Mark the picture that is not a boy and not a girl."
6-4a	Problem Solving 26: Joint Denial 2	(Same as 2-2b)	(Same as 2-2b)

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L. PROBLEM SOLVING V: CATEGORIES: SEMESTER 2

4-3a	Problem Solving 21: Categories 1	Script, Cards Teacher Booklet Tape and Recorder	Children will identify, label and sort pictures of animals and toys into appropriate categories.

L. PROBLEM SOLVING V: CATEGORIES: SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
4-4a	Problem Solving 22: Categories 2	Script Student Booklets Marking Pens Tape and Recorder	Children will identify and label instances of the categories animals and toys.
5-3b	Problem Solving 23: Categories 3	Script Teacher Booklet Cards Tape and Recorder	Children will identify, label and sort pictures of animals, toys and food into appropriate categories.
6-3b	Problem Solving 25: Categories 4	Script Student Booklets Marking Pens	Children will identify and label instances of the categories food, animals and toys.
7-1a	Problem Solving 27: Categories 5	Script Teacher Booklet Tape and Recorder	Children will identify and label instances of the categories clothing, food, animals and toys.
8-3b	Problem Solving 30: Categories 6	Script Student Booklets Marking Pens	Children will identify, label and match instances of food, clothing, animals and toys with their appropriate category.

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APPENDIX B

Description of the Sullivan (BRL) Readiness for Language Arts Program

This section outlines the content of instruction for two semesters of lessons taken from the Sullivan (BRL) Readiness for Language Arts Program. These lessons were presented to groups of five four-year-old Head Start children by semi-professional teachers employed by the UCLA Head Start Language Project.

The layout on each page gives the week and day on which the lesson was administered, the name of the lesson, the materials used, and a brief statement of the behavioral objectives for each lesson.

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
1-1	Lesson 1: "Introducing the Lion and the Tiger"	Teacher's Manual Book #1 (pp. 9-11) Cover of Readiness Book #1	The purpose of this lesson is to present the cover of Readiness Book #1 and introduce the lion and tiger who appear in later stories.
1-2	Lesson 2: Starting the Programmed Progression	Teacher's Manual Book #1 (pp. 12-16) Readiness Book #1 (pp. 1, 2)	Children identify and label the concepts black and white, up and down, and the color red.
1-3	Lesson 3: The Concept of Left and Right	Teacher's Manual Book #1 (pp. 18-24) Readiness Book #1 (pp. 2-5)	Children identify and label their left hand and right hand, the left and right sides of a page, and the color green.
2-1	Lesson 4: Introducing Square and Circular Shapes	Teacher's Manual Book #1 (pp. 26-30) Readiness Book #1 (pp. 5-7)	Children identify and label the square and circular shapes. Children discriminate relative positions of objects on a page: left, middle, right.
2-2	Lesson 4: (Continued)	Teacher's Manual Book #1 (pp. 31-35) Readiness Book #1 (pp. 8-10)	(Same as above)
2-3	Lesson 5: Beginning the Story Sequence	Teacher's Manual Book #1 (pp. 37-43) Readiness Book #1 (pp. 10-15)	The purpose of this lesson is to involve the children in an action sequence. As the lion and tiger explore the various pages, the children share in their discoveries.

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
2-4	Lesson 6: Story Sequence: "An Investigation of the Black Line and the Consequent Discovery of the Other Side of the Page"	Teacher's Manual Book #1 (pp. 45-52) Readiness Book #1 (pp. 15-20)	Children are given an opportunity to observe the animals in the process of discovery and predict the outcome of a series of events.
3-1	Lesson 7: Story Sequence: "The Animals Change Places on the Page"	Teacher's Manual Book #1 (pp. 54-57) Readiness Book #1 (pp. 20-22)	Children review the concept of left and right.
3-2	Lesson 7: (Continued)	Teacher's Manual Book #1 (pp. 58-63) Readiness Book #1 (pp. 23-26)	(Same as above)
3-3	Lesson 8: Story Sequence: "New Folk Arrive"	Teacher's Manual Book #1 (pp. 66-70) Readiness Book #1 (pp. 26-29)	This lesson introduces new animals, bird, fox and snake. Children identify and label colors blue, yellow, green, red, and tan.
3-4	Lesson 8: (Continued)	Teacher's Manual Book #1 (pp. 70-74) Readiness Book #1 (pp. 30-32)	(Same as above)
4-1	Lesson 9: Story Sequence: "The End of the Black Line and the Beginning of Pat's Friendship with the Animals"	Teacher's Manual Book #1 (pp. 76-83) Readiness Book #1 (pp. 33-36)	Children review the colors blue, yellow, red, green, tan and black by identifying them in a story sequence.

SRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
4-2	Lesson 10: Story Sequence: "Pat Paints the Animals"	Teacher's Manual Book #1 (pp. 85-93) Readiness Book #1 (pp. 37-41)	Children continue to review the colors blue, yellow, red, green, tan and black.
4-3	Lesson 11: Story Sequence: "Pat Finishes Painting the Animals and Begins to Give Lessons in Color"	Teacher's Manual Book #1 (pp. 95-101) Readiness Book #1 (pp. 41-43)	Children observe the colors red and yellow being mixed to produce orange; identify and label the color orange; classify objects according to color.
4-4	Lesson 11: (continued)	Teacher's Manual Book #1 (pp. 102-110) Readiness Book #1 (pp. 44-46)	(Same as above)
5-1	Lesson 12: Story Sequence: "The Animals Classify Objects by Color"	Teacher's Manual Book #1 (pp. 112-115) Readiness Book #1 (pp. 46-48)	Children classify objects according to color and describe the content of each page of the lesson.
5-2	Lesson 12: (Continued)	Teacher's Manual Book #1 (pp. 116-122) Readiness Book #1 (pp. 49-51)	(Same as above)
5-3	Lesson 13: Story Sequence: "The Animals Continue to Think of Colored Things"	Teacher's Manual Book #1 (pp. 124-130) Readiness Book #1 (pp. 51-55)	Children classify objects according to color and review the colors yellow and tan.

ERL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
5-4	Lesson 14: Color Exercises	Teacher's Manual Book #1 (pp. 132-136) Readiness Book #1 (pp. 55-58)	Children review colors taught thus far; are introduced to the color purple and the concept of variation in shade, light and dark colors (purple-lavender, red-pink, brown-tan, black-gray).
6-1	Lesson 14: (Continued)	Teacher's Manual Book #1 (pp. 137-144) Readiness Book #1 (pp. 59, 60)	(Same as above)
6-2	Lesson 15: Introducing the Letter a	Teacher's Manual Book #1 (pp. 145-151) Readiness Book #1 (pp. 60-64)	Children identify and label the letter a.
6-3	Lesson 16: The Letters a, b, and c	Teacher's Manual Book #1 (pp. 153-157) Readiness Book #1 (pp. 64-66)	Children identify and label the letters a, b, and c; and learn their aplhabetical order.
6-4	Lesson 16: (Continued)	Teacher's Manual Book #1 (pp. 158-163) Readiness Book #1 (pp. 67, 68)	(Same as above)
7-1	Lesson 17: The Letters a, b, c, and d	Teacher's Manual Book #1 (pp. 165-172) Readiness Book #1 (pp. 68-70)	Children review a, b, and c; identify and label d; and learn to spell dad.

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
7-2	Lesson 17: (Continued)	Teacher's Manual Book #1 (pp. 173-180) Readiness Book #1 (pp. 71, 72)	(Same as above)
**		END OF READINESS BOOK #1	**
7-3	Lesson 1: Letter Review	Teacher's Manual Book #2 (pp. 5-8) Readiness Book #2 (Cover and page 1)	Children review a, b, c, and d and learn to spell dad and bad.
7-4	Lesson 1: (Continued)	Teacher's Manual Book #2 (pp. 8-13) Readiness Book #2 (p. 2)	(Same as above)
8-1	Lesson 2: Reviewing a, b, and c	Teacher's Manual Book #2 (pp. 14-21) Readiness Book #2 (pp. 2-5)	Children review letters a, b, and c; spell the word cab and discuss the meaning of the word.
8-2	Lesson 3: The Alphabet: The Letters e, f, and g	Teacher's Manual Book #2 (pp. 23-26) Readiness Book #2 (p. 5)	Children learn the concept of the alphabet and alphabetical order. They also identify and name the letters a through g in alphabetical order.

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
8-3	Lesson 3: (Continued)	Teacher's Manual Book #2 (pp. 26-32) Readiness Book #2 (p. 6)	(Same as above)
8-4	Lesson 3: (Continued)	Teacher's Manual Book #2 (pp. 33-38) Readiness Book #2 (p. 7)	(Same as above)
9-1	Lesson 4: The Letters a Through g	Teacher's Manual Book #2 (pp. 39-41) Readiness Book #2 (pp. 7, 8)	Children review the letters a through g; the concept of alphabetical order and spell the words bed, bag and beg.
9-2	Lesson 4: (Continued)	Teacher's Manual Book #2 (pp. 42-48) Readiness Book #2 (p. 9)	(Same as above)
9-3	Lesson 5: The Letters h, i, and j	Teacher's Manual Book #2 (pp. 49-55) Readiness Book #2 (pp. 9, 10)	Children identify and name the letters h, i, and j; review the concept of alphabetical order; and identify the letters a through j on the alphabet chart.
9-4	Lesson 5: (Continued)	Teacher's Manual Book #2 (pp. 56-63) Readiness Book #2 (pp. 11, 12)	(Same as above)

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
10-1	Lesson 6: Spelling	Teacher's Manual Book #2 (pp. 64-73) Readiness Book #2 (pp. 12, 13)	Children review the letters a through j and spell the words hid, had, dad, did, big, dig, jig and fig.
10-2	Lesson 7: Story Sequence: "The Lion's Trip Through the Alphabet"	Teacher's Manual Book #2 (pp. 74-78) Readiness Book #2 (pp. 13, 14)	Children review the names of the letters a through j in frequent drills and locate each letter on the alphabet chart.
10-3	Lesson 7: (Continued)	Teacher's Manual Book #2 (pp. 79-84) Readiness Book #2 (pp. 15, 16)	(Same as above)
10-4	Lesson 7: (Continued)	Teacher's Manual Book #2 (pp. 85-89) Readiness Book #2 (pp. 17-19)	(Same as above)
11-1	Lesson 8: Story Sequence: "The Lion Meets the Letter k"	Teacher's Manual Book #2 (pp. 90-97) Readiness Book #2 (pp. 19-24)	Children identify and name the letter k and review letters a through k.
11-2	Lesson 9: Story Sequence: "The Lion Meets l and m"	Teacher's Manual Book #2 (pp. 98-105) Readiness Book #2 (pp. 24-30)	Children identify and name the letters l and m and review the letters a through m.

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 1

Week-Day	Name of Program	Materials	Instructional Objectives
11-3	Lesson 10: Story Sequence: "The Lion's Adventure With m, n, and o"	Teacher's Manual Book #2 (pp. 106-110) Readiness Book #2 (pp. 30-33)	Children identify and name the letters n, o, and p and review the letters a through p.
11-4	Lesson 10: (Continued)	Teacher's Manual Book #2 (pp. 110-116) Readiness Book #2 (pp. 34-36)	(Same as above)
12-1	Lesson 11: Story Sequence: "The Lion's Struggles With o, p, and q"	Teacher's Manual Book #2 (pp. 117-122) Readiness Book #2 (pp. 36-39)	Children review letters o and p; are introduced the letter q; and discriminate between p and q.
12-2	Lesson 11: (Continued)	Teacher's Manual Book #2 (pp. 123-126) Readiness Book #2 (pp. 40-42)	(Same as above)
12-3	Lesson 12: Story Sequence: "The Lion Meets Four New Letters"	Teacher's Manual Book #2 (pp. 128-132) Readiness Book #2 (pp. 42-45)	Children identify and name the letters r, s, t, and u.
12-4	Lesson 12: (Continued)	Teacher's Manual Book #2 (pp. 132-137) Readiness Book #2 (pp. 46-48) and Alphabet Chart Letter Identification Exercises	(Same as above)

** END OF SEMESTER 1 **

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
1-1	Lesson 13: Story Sequence: "Adventures With u, v, and w"	Teacher's Manual Book #2 (pp. 138-144) Readiness Book #2 (pp. 48-54)	Children identify and name the letters u, v, and w.
1-2	Lesson 14: Story Sequence: "The Lion Reaches x and Gets Stuck"	Teacher's Manual Book #2 (pp. 145-148) Readiness Book #2 (pp. 54-56 and Alphabet Chart)	Children identify and name the letter x and discriminate between w and x.
1-3	Lesson 14: (Continued)	Teacher's Manual Book #2 (pp. 149-153) Readiness Book #2 (pp. 57-60)	(Same as above)
1-4	Lesson 15: Story Sequence: "The End of the Alphabet"	Teacher's Manual Book #2 (pp. 154-160) Readiness Book #2 (p. 60)	Children identify and name the letters y and z and review each letter of the alphabet.
2-1	Lesson 15: Story Sequence: "The End of the Alphabet" (Continued)	Teacher's Manual Book #2 (pp. 161-164) Readiness Book #2 (pp. 61-63)	Children identify and name the letters y and z and review each letter of the alphabet.
2-2	Lesson 15: (Continued)	Teacher's Manual Book #2 (pp. 164-174) Readiness Book #2 (pp. 64, 65)	(Same as above)

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
2-3	Lesson 15: (Continued)	Teacher's Manual Book #2 (pp. 164-174) Readiness Book #2 (pp. 64, 65)	(Same as above)
2-4	Lesson 16: Story Sequence: "The End of the Dream"	Teacher's Manual Book #2 (pp. 175-179) Readiness Book #2 (pp. 65-67)	Children identify and name all the letters of the alphabet in order.
3-1	Lesson 16: (Continued)	Teacher's Manual Book #2 (pp. 180-184) Readiness Book #2 (pp. 68-70)	(Same as above)
3-2	Lesson 17: Review: The Animals and the Letters	Teacher's Manual Book #2 (pp. 185-191) Readiness Book #2 (pp. 70-72)	Children have additional practice in naming the letters of the alphabet, in both alphabetical and random sequence.
**		END OF READINESS BOOK #2	**
3-3	Lesson 1: Reviewing the Small Letters	Teacher's Manual Book #3 (pp. 6-11) Readiness Book #3 (pp. 1,2 and cover)	Children identify and name the small letters a through g.
3-4	Lesson 1: (Continued)	Teacher's Manual Book #3 (pp. 12-16) Readiness Book #3 (p. 3)	(Same as above)

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
4-1	Lesson 1: (Continued)	Teacher's Manual Book #3 (pp. 16-24) Readiness Book #3 (pp. 4, 5)	(Same as above)
4-2	Lesson 2: Reviewing the Small Letters	Teacher's Manual Book #3 (pp. 25-31) Readiness Book #3 (pp. 5-7)	Children identify and name the small letters a through z.
4-3	Lesson 2: (Continued)	Teacher's Manual Book #3 (pp. 32-35) Readiness Book #3 (pp. 8, 9)	(Same as above)
4-4	Lesson 3: Spelling Review and the Introduction of Capital P	Teacher's Manual Book #3 (pp. 36-41) Readiness Book #3 (pp. 9-11)	Children learn to spell bad, sad, bat, cat, fat, and hat. Children also identify and name the capital letter P and develop the concept of capital letters.
5-1	Lesson 3: (Continued)	Teacher's Manual Book #3 (pp. 42-50) Readiness Book #3 (pp. 12-14)	(Same as above)
5-2	Lesson 4: The Capital Letters A through H	Teacher's Manual Book #3 (pp. 51-56) Readiness Book #3 (pp. 14, 15)	Children identify and name capital letters A through H and discriminate these capital letters from their corresponding small letters.

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
5-3	Lesson 4: (Continued)	Teacher's Manual Book #3 (pp. 57-63) Readiness Book #3 (pp. 16, 17)	(Same as above)
5-4	Lesson 4: (Continued)	Teacher's Manual Book #3 (pp. 64-69) Readiness Book #3 (pp. 18, 19)	(Same as above)
6-1	Lesson 5: The Capital Letters A through J	Teacher's Manual Book #3 (pp. 70-75) Readiness Book #3 (pp. 19-21)	Children identify and name the capital letters I, J, and K, and review letters A through K.
6-2	Lesson 5: (Continued)	Teacher's Manual Book #3 (pp. 76-83) Readiness Book #3 (pp. 22-24)	(Same as above)
6-3	Lesson 6: The Capital Letters Review	Teacher's Manual Book #3 (pp. 84-90) Readiness Book #3 (pp. 24-26)	Children review capital letters A through J and discriminate these from their corresponding small letters.
6-4	Lesson 6: (Continued)	Teacher's Manual Book #3 (pp. 91-96) Readiness Book #3 (pp. 27-30)	(Same as above)

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
7-1	Lesson 7: The Letters K, L, M, N, and O	Teacher's Manual Book #3 (pp. 97-102) Readiness Book #3 (pp. 30-33)	Children identify and name the capital letters L, M, N, and O, and review the capital letters A through O.
7-2	Lesson 7: (Continued)	Teacher's Manual Book #3 (pp. 103-107) Readiness Book #3 (pp. 34-36)	(Same as above)
7-3	Lesson 8: Capital O Through Capital V	Teacher's Manual Book #3 (pp. 108-113) Readiness Book #3 (pp. 36-39)	Children identify and name the capital letters P through V and discriminate these from their corresponding small letters.
7-4	Lesson 8: (Continued)	Teacher's Manual Book #3 (pp. 113-119) Readiness Book #3 (p. 40)	(Same as above)
8-1	Lesson 9: Small and Capital Letters: S Through V	Teacher's Manual Book #3 (pp. 120-125) Readiness Book #3 (pp. 40, 41)	Children identify and name the capital letters S, T, U, and V; arrange these letters in alphabetical order; and discriminate these letters from their corresponding small letters.
8-2	Lesson 9: (Continued)	Teacher's Manual Book #3 (pp. 125-130) Readiness Book #3 (pp. 42-44)	(Same as above)

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
8-3	Lesson 9: (Continued)	Teacher's Manual Book #3 (pp. 130-133) Readiness Book #3 (pp. 45, 46)	(Same as above)
8-4	Lesson 10: The Letters W, X, and Z	Teacher's Manual Book #3 (pp. 134-141) Readiness Book #3 (pp. 46-48)	Children identify and name capital letters W, X, Y, and Z, and review all capital and small letters.
9-1	Lesson 10: (Continued)	Teacher's Manual Book #3 (pp. 141-148) Readiness Book #3 (pp. 49, 50)	(Same as above)
9-2	Lesson 11: Capital Letter Review	Teacher's Manual Book #3 (pp. 149-155) Readiness Book #3 (pp. 50, 51)	Children review capital letters A through Z and discriminate these from their corresponding small letters.
9-3	Lesson 11: (Continued)	Teacher's Manual Book #3 (pp. 155-162) Readiness Book #3 (pp. 52, 53)	(Same as above)
9-4	Lesson 12: Proper Names	Teacher's Manual Book #3 (pp. 163-170) Readiness Book #3 (pp. 53, 54)	Children learn the function of capital letters in proper names and practice spelling Abe, Ben, Ann, Bob, Al, Bill, Fred, Fran, Tom, Tilly, Harry, Fifi, Peter, New York, Rome, Mexico, and Holland.

SRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
10-1	Lesson 12: (Continued)	Teacher's Manual Book #3 (pp. 171-180) Readiness Book #3 (pp. 55, 56)	(Same as above)
10-2	Lesson 12: (Continued)	Teacher's Manual Book #3 (pp. 181-187) Readiness Book #3 (pp. 57, 58)	(Same as above)
10-3	Lesson 13: Rhyming Words	Teacher's Manual Book #3 (pp. 188-196) Readiness Book #3 (pp. 58, 59)	Children review capital letters in proper names and develop the concept of rhyming using man-can, mat-pat, can-pan, pan-dan, fat-cat, big-pig, rug-bug, red-head, wet-pet, fly-high, fin-pin, tan-pan, cat-hat, mat-cat, cat-hat.
10-4	Lesson 13: (Continued)	Teacher's Manual Book #3 (pp. 196-202) Readiness Book #3 (p. 60)	(Same as above)
11-1	Lesson 13: (Continued)	Teacher's Manual Book #3 (pp. 202-208) Readiness Book #3 (p. 61)	(Same as above)
11-2	Lesson 13: (Continued)	Teacher's Manual Book #3 (pp. 209-216) Readiness Book #3 (p. 62 and Supplementary Work)	(Same as above)

SWRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
11-3	Lesson 14: Rhyming Words	Teacher's Manual Book #3 (pp. 216-226) Readiness Book #3 (pp. 63, 64)	Children spell Pat, Nan, Nat, Dan, Sam, Pam, Jim, cat, can, fish, pan, dish, mat, Ann, Bob, Ed, Carl and Fred; rhyme Pat-Nat, Dan-Nan, Sam-Pam, cat-mat, can-pan, dish-fish, and discriminate words with the same initial consonants.
11-4	Lesson 14: (Continued)	Teacher's Manual Book #3 (pp. 226-236) Readiness Book #3 (pp. 65, 66)	(Same as above)
12-1	Lesson 15: Letter Review: Capital A Through Capital P	Teacher's Manual Book #3 (pp. 237-241) Readiness Book #3 (pp. 66, 67)	Children identify and name capital letters A through P and small letters by spelling Ann, Bob, Carl, Dan, Ed, Fred, Gabby, Harry, Inky, Jerry, Kate, Larry, Mark, Nan, Otto and Pat.
12-2	Lesson 15: (Continued)	Teacher's Manual Book #3 (pp. 242-247) Readiness Book #3 (pp. 68, 69)	(Same as above)
12-3	Lesson 16: Letter Review: Capital Q Through Capital Z	Teacher's Manual Book #3 (pp. 248-253) Readiness Book #3 (pp. 69, 70)	Children identify and name capital letters Q through S by spelling proper names Quin, Bob, Sam; discriminate the capital letters T, U, V, W, X, Y and Z, and rhyme the words Bob-Rob, Sam-Jam, Quin-Pin.

BRL READINESS FOR LANGUAGE ARTS PROGRAM - SEMESTER 2

Week-Day	Name of Program	Materials	Instructional Objectives
12-4	Lesson 16: (Continued)	Teacher's Manual Book #3 (pp. 253-256) Readiness Book #3 (pp. 71, 72)	(Same as above)

** END OF SEMESTER 2 **

APPENDIX C

Description of the Placebo Control Program

This section describes the content of the two semesters of the Placebo Control Program. The materials were presented to groups of five four-year-old Head Start children by semi-professional teachers employed by the UCLA Head Start Language Project.

The layout on each page gives the week and the day on which the activities were conducted and the types of materials used. Instructional objectives are not listed, for this program was designed to control for the Hawthorne Effect by providing children with non-instructional language experiences and contact with an adult other than their regular teacher.

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Source
1-1	MUSIC: A "Together" Song STORY: Whistle For Willie	Script Book	German Folk Tune Whistle For Willie
1-2	POEM: Fuzzy FINGERPLAY: The Airplane; Here; My Hands	Script	Talking Time Let's Do Fingerplays
1-3	MUSIC: 76 Trombones; Do-Re-Mi NURSERY RHYMES: Humpty Dumpty; Tommy Snooks; Georgie Porgie; Hickory Dickery Dock	Script Book Tape and Recorder	Music Man The Sound of Music Mother Goose
1-4	STORY: Here Comes Daddy COLORING	Script Coloring Booklets Crayons	Read-to-Me Storybook
2-1	MUSIC: Blue Tail Fly STORY: I Am Here	Script Book Tape and Recorder	American Folk Tune I Am Here
2-2	POEM: The Clock FINGERPLAY: Playmates	Script	Read-to-Me Storybook Let's Do Fingerplays
2-3	MUSIC: Getting to Know You; My Favorite Things GAME: London Bridges	Script Tape and Recorder	The King and I The Sound of Music Mother Goose
2-4	NURSERY RHYMES: Tom, Tom; Ride A Cock Horse; Mary, Mary; Hark, Hark COLORING	Script Book Coloring Booklets Crayons	Mother Goose

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Source
3-1	MUSIC: Oklahoma! STORY: The Baby Beebee Bird	Script Book Tape and Recorder	Oklahoma! The Baby Beebee Bird
3-2	POEM: I Went For a Walk FINGERPLAY: The Wheels of The Bus; Eensy Weensy Spider	Script	Read-to-Me Storybook Finger Play
3-3	MUSIC: Yankee Doodle GAME: Find My Child	Script Tape and Recorder	American Folk Tune Games For Children
3-4	NURSERY RHYMES: Hickity Pickity; Little Boy Blue; Diddle, Diddle Dumpling; Doctor Foster COLORING	Script Book Coloring Booklets Crayons	Mother Goose
4-1	MUSIC: Dayenu; He's Got The Whole World in His Hands STORY: Always Help A Bird	Script Book Tape and Recorder	Hebrew Song Negro Spiritual Always Help A Bird
4-2	STORY: Pitter, Patter FINGERPLAY: Little Cottage In The Wood	Script	Read-to-Me Storybook American Folk Song
4-3	MUSIC: Marching To Pretoria GAME: Down In The Box	Script Tape and Recorder	So. African Veld Folk Song Games For Boys and Girls
4-4	NURSERY RHYMES: Crooked Man; Bye Baby Bunting; Hush A Bye Baby; Hey Diddle, Diddle; North Wind Doth Blow COLORING	Script Book Coloring Booklets Crayons	Mother Goose

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Source
5-1	MUSIC: Supercalifragilistic	Script	Mary Poppins
	STORY: The Snowy Day	Book Tape and Recorder	The Snowy Day
5-2	POEM: Hiding	Script	Let's-Read-Together Poems
	FINGERPLAY: We Wash Our Shirt; Pat-A-Cake		Let's Do Fingerplay
5-3	MUSIC: Jiminy Cricket; Hi-Diddle-Dee-Dee	Script Tape and Recorder	Pinocchio
	FINGERPLAY: My Pumpkin; Scary Eyes; I've A Jack-O-Lantern; Halloween Witches		Let's Do Fingerplay
	POEM: Little Jack Pumpkin Face		Talking Time
5-4	NURSERY RHYMES: Two Little Dicky Birds; Old King Cole; What Are Little Boys Made of; What Are Little Girls Made Of; Little Miss Muffet; Little Jack Horner; Pussy Cat, Pussy Cat	Script Book Coloring Booklets Crayons	Mother Goose
	COLORING		
6-1	MUSIC: Joshua	Script	Negro Folk Tune
	STORY: Crow Boy	Book Tape and Recorder	Crow Boy
6-2	POEMS: What Does Little Birdie Say?; Brown Birdie	Script	Talking Time
	FINGERPLAY: Bedtime; Peas Porridge		Let's Do Fingerplays

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Source
6-3	MUSIC: Go Tell Aunt Rhody GAME: In And Out The Window	Script Tape and Recorder	American Folk Tune Dutch Children's Folk Song
6-4	NURSERY RHYMES: Wee Willie Winkie; Little Cock Sparrow; Ding Dong Bell; Three Blind Mice; There Was A Little Girl; Where, Oh Where COLORING	Script Book Coloring Booklets Crayons	Mother Goose
7-1	MUSIC: A Spoonful of Sugar STORY: Pierre (A Cautionary Tale)	Script Book Tape and Recorder	Mary Poppins Pierre (A Cautionary Tale)
7-2	POEM: Adventure FINGERPLAY: Join in The Game; The Teapot	Script	Talking Time Finger Play Let's Do Fingerplays
7-3	MUSIC: I Whistle A Happy Tune; Give A Little Whistle FINGERPLAY: Where Is Thumbkin?	Script Tape and Recorder	The King and I Snow White Finger Play
7-4	NURSERY RHYMES: Old Mother Hubbard; If I Had A donkey; I Saw A Ship A-Sailing; Jack and Jill COLORING	Script Book Coloring Booklets Crayons	Mother Goose
8-1	MUSIC: Michael Row Your Boat Ashore STORY: The Very Little Girl	Script Book Tape and Recorder	Negro Folk Tune The Very Little Girl

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Source
8-2	POEMS: Melinda Likes To Moo; Fuzzy	Script	Talking Time
	FINGERPLAY: Sleepy Fingers; Choo Choo Train		Let's Do Fingerplays
8-3	MUSIC: Pick-A-Little-Talk-A-Little	Script Tape and Recorder	Music Man
	GAME: Little Miss Muffet		Mother Goose
8-4	NURSERY RHYMES: Simple Simon; Peter Piper; Jack-Be-Nimble; Hickery Dickery Dock; If All The World; Rain, Rain Go Away; See Saw Margery Daw; I Love Little Pussy	Script Book Coloring Booklets Crayons	Mother Goose
	COLORING		
9-1	MUSIC: Around The World	Script	Around The World In 80 Days
	STORY: The Very Little Boy	Book Tape and Recorder	The Very Little Boy
9-2	POEMS: Clapping Game; The Pancake	Script	The Home Book of Verse For Young Folks
	FINGERPLAY: Kitty, Kitty; The Alligator; Row, Row, Row Your Boat		Let's Do Fingerplays
9-3	MUSIC: So Long, It's Been Good To Know You;	Script Tape and Recorder	American Folk Tune
	This Land is Your Land		American Folk Tune
	POEM: Thanksgiving		Talking Time

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Source
9-4	NURSERY RHYMES: Goosey Gander; Charley, Charley; Little Polly Flanders; Curley Locks COLORING	Script Book Coloring Booklets Crayons	Mother Goose
10-1	MUSIC: Talk To The Animals STORY: Good Night Moon	Script Book Tape and Recorder	Dr. Doolittle Good Night Moon
10-2	POEMS: Lunchtime at The Zoo; The Kangaroo FINGERPLAY: Down By The Station; When You're Happy and You Know It	Script	The Golden Book of Verses Let's Do Fingerplays
10-3	MUSIC: Old MacDonald GAME: See Saw, Margery Daw	Script Tape and Recorder	Children's Folk Song Mother Goose
10-4	NURSERY RHYMES: Baa, Baa, Black Sheep; Mary Had A Little Lamb; Little Tommy Tucker; The Queen of Hearts COLORING	Script Book Coloring Booklets Crayons	Mother Goose
11-1	MUSIC: Jan Pieriewiet STORY: Peter's Chair	Script Book Tape and Recorder	So. African Veld Folk Tune Peter's Chair
11-2	POEM: The Swing FINGERPLAY: The Little Squirrels; Eeeny, Meeny, Miney Mo	Script	A Child's Garden of Verses Let's Do Fingerplays

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 1

Week-Day	Name of Program	Materials	Source
11-3	MUSIC: The Zulu Warrior; Put Your Finger In The Air	Script Tape and Recorder	So. African Veld Folk Tune Children's Folk Song
11-4	NURSERY RHYMES: Sing A Song of Sixpence; This Little Pig; Cross Patch; Jack Spratt; Peter, Peter COLORING	Script Book Coloring Booklets Crayons	Mother Goose
12-1	MUSIC: Las Posadas; It Could Be A Wonderful World STORY: I Can Fly	Script Book Tape and Recorder	Mexican Folk Tune American Folk Tune I Can Fly
12-2	POEM: Christmas Bells FINGERPLAY: Here Is A Cup; I Shut The Door; The Very Nicest Place	Script	Talking Time Let's Do Fingerplays
12-3	MUSIC: Hanukah; Jingle Bells COLORING	Script Tape and Recorder Coloring Booklets Crayons	Jewish Folk Song Folk Song
12-4	MUSIC: Away In A Manger; We Wish You A Merry Christmas STORY: On Christmas Eve	Script Book Tape and Recorder	Christmas Hymn Christmas Song On Christmas Eve

*** END OF SEMESTER 1 **

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Source
1-1	POEM: The Cow STORY: Come And Have Fun	Script Book	A Child's Garden of Verses Come and Have Fun
1-2	GAME: Eeeny Meeny Miney Mo FINGERPLAY: Here Is A Ball For Baby; Knock At The Door	Script Tape and Record	Let's Do Fingerplays This Little Pig Went To Market
1-3	MUSIC: 76 Trombones GAME: Our Gallant Ship	Script Tape and Recorder	Music Man This Little Pig Went To Market
1-4	POEM: Television COLORING	Script Coloring Booklets Crayons	Read-to-Me Again
2-1	FINGERPLAY: Face Tapping STORY: Sir Henry and the Dragon	Script Book	This Little Pig Went To Market Sir Henry and The Dragon
2-2	POEM: My Puppy MUSIC: The Trolley Song	Script Tape and Recorder	Talking Time Meet Me In St. Louis
2-3	MUSIC: Why, Oh Why STORY: First Night Away From Home	Script Book Tape and Recorder	American Folk Song First Night Away From Home
2-4	POEM: Good Morning COLORING	Script Coloring Booklets Crayons	Let's-Read-Together Poems
3-1	POEM: The Animal Store STORY: Two Is A Team	Script Book	Read Aloud Poems Two Is A Team
3-2	POEM: The Little Turtle GAME: Looby Loo	Script	Let's-Read-Together Poems This Little Pig Went to Market

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Source
3-3	MUSIC: The Whistler And His Dog FINGERPLAY: Here Is The Church; The Little Brownie	Script Tape and Recorder	The Sound of Musical Pictures Let's Do Fingerplays Talking Time
3-4	FINGERPLAY: The Bear Went Over The Mountain COLORING	Script Coloring Booklets Crayons	Let's Do Fingerplays
4-1	POEMS: Mr. Rabbit; Mud STORY: Did A Bear Just Walk There?	Script Book	Read-Aloud Poems Did A Bear Just Walk There?
4-2	FINGERPLAY: My Family GAME: Ring O'Roses	Script	Talking Time This Little Pig Went to Market
4-3	MUSIC: Where Have You Been? GAME: A tisket, A Tasket	Script Tape and Recorder	American Folk Song Games For Children
4-4	MUSIC: Zip-A-Dee-Doo-Dah COLORING	Script Tape and Recorder Coloring Booklets Crayons	Uncle Remus
5-1	POEM: Mice STORY: Is Susan Here?	Script Book	Favorite Poems Old And New Is Susan Here?
5-2	MUSIC: I Know A Little Girl In Red Pajamas FINGERPLAY: This Old Man	Script Tape and Recorder	American Folk Song This Little Pig Went To Market
5-3	POEM: Adventure GAME: Seesaw Margery Daw	Script	Talking Time This Little Pig Went To Market

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Source
5-4	MUSIC: Yankee Doodle COLORING	Script Tape and Recorder Coloring Booklets Crayons	American Folk Song
6-1	POEMS: Washing; Little Black Bug STORY: Smoky And His Animal Friends	Script Book	Favorite Poems Old And New Smoky And His Animal Friends
6-2	MUSIC: Get on Board, Little Children GAME: Sally Go Round The Moon; Cobbler, Cobbler, Mend My Shoes	Script Tape and Recorder	Negro Spiritual Games For Children
6-3	MUSIC: Bimbo STORY: When I Grow Up	Script Book Tape and Recorder	American Folk Song When I Grow Up
6-4	POEM: I Love Little Pussy COLORING	Script Coloring Booklets Crayons	Let's-Read-Together Poems
7-1	POEM: The Goldfish STORY: Me And The Bears	Script Book	All Together, A Child's Garden of Verses Me And The Bears
7-2	MUSIC: Talk To The Animals GAME: Who's Missing?	Script Tape and Recorder	Dr. Doolittle Games For Young Children
7-3	MUSIC: Parade of The Wooden Soldiers STORY: Charlie Scarecrow	Script Book Tape and Recorder	The Sound of Top Brass Talking Time

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Source
7-4	FINGERPLAY: Round and Round; Knock At The Door COLORING	Script Coloring Booklets Crayons	This Little Pig Went To Market
8-1	POEMS: See, I Can Do It; Hot Weather STORY: Josie's Buttercup	Script Book	All Together, A Child's Treasury of Verse Josie's Buttercup
8-2	MUSIC: It Could Be A Wonderful World FINGERPLAY: Hickory Dickery Dock	Script Tape and Recorder	American Folk Song Let's Do Fingerplays
8-3	MUSIC: A Spoonful of Sugar POEM: I Met A Man With Three Eyes	Script Tape and Recorder	Mary Poppins I Met A Man
8-4	POEM: Sing A Song Of Sixpence COLORING:	Script Booklets, Crayons	Home Book of Verse For Young Folks
9-1	POEMS: Little Fluffy Kitten; Little Black Train STORY: Baby Elephant Goes To China	Script Book	Talking Time Wonderful Story Book Baby Elephant Goes To China
9-2	MUSIC: The Midnite Fire Alarm STORY: Baby Elephant Goes To China	Script Book Tape and Recorder	The Sound of Musical Pictures Baby Elephant Goes To China
9-3	GAME: The Mulberry Bush POEM: Where, Oh Where	Script	This Little Pig Went To Market
9-4	MUSIC: This Land Is Young Land COLORING	Script Tape and Recorder Booklets, Crayons	American Folk Song

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Source
10-1	POEM: Three Little Kittens	Script	Talking Time
	STORY: Andy And His Fine Friends	Book	Andy And His Fine Friends
10-2	MUSIC: Blowing In The Wind	Script	American Folk Song
	GAME: Did You Ever See A Lassie?	Tape and Recorder	English Folk Tune
10-3	MUSIC: Old MacDonald Had A Farm	Script	Children's Song
	FINGERPLAY: Where Is Thumbkin?	Tape and Recorder	Fingerplay
10-4	POEM: This Man Lives at My House Now	Script Coloring Booklets	I Met A Man
	COLORING	Crayons	
11-1	FINGERPLAY: Here's A Ball For Baby	Script Book	This Little Pig Went To Market
	STORY: Danny And The Dinosaur		Danny And The Dinosaur
11-2	MUSIC: Jan Pieriewiet	Script	So. African Veld Folk Song
	POEM: Mousie Brown	Tape and Recorder	Talking Time
11-3	GAME: She'll Be Coming Round The Mountain	Script Tape and Recorder	Finger Play
	POEM: Hickory Dickery Dock		This Little Pig Went To Market
11-4	STORY: Here Comes Daddy	Book	Here Comes Daddy
	COLORING	Coloring Booklets Crayons	
12-1	POEM: To Be A Duck	Script	Read-to-Me Again
	STORY: Some Cheese For Charles	Book	Some Cheese For Charles

UCLA PLACEBO CONTROL PROGRAM: SEMESTER 2

Week-Day	Name of Program	Materials	Source
12-2	MUSIC: Big Rock Candy Mountain	Script	American Folk Song
	POEM: Little Jack Horner	Tape and Recorder	This Little Pig Went To Market
12-3	MUSIC: Give A Little Whistle	Script	Pinocchio
	GAME: We Are Off To Timbuctoo	Tape and Recorder	Games For Children
12-4	GAME: Oh Dear, What Can The Matter Be?	Script Coloring Booklets	This Little Pig Went To Market
	COLORING	Crayons	

* END OF SEMESTER 2 *

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APPENDIX D

UCLA Early Childhood Language Tests

Manual

June, 1969

SCORING PROCEDURES

A) Mark (+) for correct response.
Mark (0) for incorrect response.

B) When there are three alternatives, the examiner is asked to record the alternative chosen by the child: A, B, or C. We want to know which alternative is selected as well as whether the child answered correctly. The items will be scored later as correct or incorrect.

C) To score the SEQUENCING section of the test, simply write the order in which the child places the cards. The item will be scored later as correct or incorrect.

D) The test is in two parts: INDIVIDUAL and GROUP.

1. INDIVIDUAL: Work with one child at a time.
2. GROUP: There are five (5) children in a group. Proceed as follows for all group testing: Hand out booklets and pencils to children. Tell them to wait for directions and to put their hands on lap until ready. Check to see that children turn to correct page when you tell them to turn the page. Children should be told and encouraged, NOT FORCED, to mark each page.

NOTE: Score booklets after testing each day.

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PART I

INDIVIDUAL

PICTURE READING (A, B, & C)

Materials: (A) 2 Cards: Boy flying kite, boy losing kite.
(B) 3 Cards: Girl riding bike, girl falling off bike, girl crying in mother's arms.

Procedure: SET UP TAPE RECORDER AND MIKE. BE SURE IT IS IN RECORD
(A & B) POSITION. AT THE BEGINNING OF EACH REEL, STATE NAME OF SCHOOL, DATE OF RECORDING, AND SAY:
Picture Reading Test.
GIVE CHILD'S NAME. THEN, PLACE SET A IN FRONT OF CHILD, SAVE HAND OVER PICTURES FROM LEFT TO RIGHT ONLY, AND SAY:

Tell me a story about these pictures.

AFTER 5-SECOND INTERVAL IN WHICH CHILD DOES NOT SPEAK, REMOVE SET A. SHOW SET B AND SAY:

Now tell me a story about these pictures.

RECORD: WRITE DOWN EVERYTHING THE CHILD SAYS IN DESCRIBING THE PICTURES WHILE THE TAPE RECORDER IS OPERATING.
TURN OFF TAPE RECORDER.

(C) Picture Description

Materials: Picture Cards
Procedure: SHOW CARDS IN ORDER AS SEEN BELOW AND SAY:

I'm going to tell you about a picture. You say what I say.

1. The baby is sitting under the table.
2. The boy is talking on the telephone.
3. The boy is sitting on the swing.

FOR ITEMS 4-11 SHOW PICTURE ONLY AND SAY: Now you tell me about these pictures.

4. The boy is sitting on the car.
5. The girl is standing between the chairs.
6. The boy is playing a guitar.
7. The lady is standing in front of the table.
8. The baby is sitting inside the basket.
9. The man is looking under the desk.
10. The boy is standing by the box.
11. The boy is digging with the shovel.

RECORD: ON INDIVIDUAL SCORE SHEET, CROSS OUT WORDS OMITTED AND ENTER EXTRA WORDS PUT IN BY CHILD.

PARALLEL SENTENCE PRODUCTION

Materials: Booklet

Procedure: (TURN TO PAGE A, POINT TO LEFT PICTURE AND SAY:) This cat is playing with a ball. (POINT TO RIGHT PICTURE) This dog is playing with a bone. Now you tell me about this picture. (IF CORRECT, REINFORCE RESPONSE. DO NOT PROCEED UNTIL CHILD ATTEMPTS SENTENCE.)

(TURN TO PAGE B, POINT TO LEFT) The little boy is riding a little bike. (POINT TO RIGHT) The big boy is riding a big bike. Now you tell me about this picture. (DO NOT PROCEED UNTIL CHILD ATTEMPTS SENTENCE. REPEAT IF NECESSARY. IF CHILD REFUSES TO RESPOND, DISCONTINUE TEST.)

TEACHER	CHILD	POINT SCORE
1. This cat is sleeping.	1. This dog is sleeping.	(5)
2. The boy is drawing a picture.	2. The girl is painting a picture.	(6)
3. This big hat has many flowers.	3. This little hat has one flower.	(7)
4. Some boys grow up to be doctors.	4. Some girls grow up to be nurses.	(8)
5. The fat lady sat on a little chair.	5. The skinny lady sat on a big chair.	(8)
6. Elephants like to eat peanuts.	6. Monkeys like to eat bananas.	(6)
7. The fork is on the plate.	7. The spoon is in the cup.	(7)
8. The boy standing up and smiling is happy.	8. The girl sitting down and crying is sad.	(9)
9. Birds fly in the air.	9. Fish swim in the water.	(6)
10. The little boy is holding his balloon.	10. The big girl is holding her ball.	(8)
11. The man is lifting a big heavy box.	11. The lady is carrying a little light box.	(8)
12. The cat jumps into the box.	12. The dog sits under the table.	(7)
13. When it is night, children sleep in bed.	13. When it is day, children play outdoors.	(8)
14. This boy likes to skate.	14. These boys like to swim.	(6)
15. In the summer the trees have leaves.	15. In the winter the trees do not have leaves.	(10)
16. The boy throws the ball to her.	16. The girl kicks the ball to him.	(8)
17. The boy feeds himself with a fork.	17. The girl feeds herself with a spoon.	(7)
18. This girl is making her bed.	18. This girl made her bed.	(6)
19. The girl with the short dress is wearing shoes.	19. The girl with the long dress is not wearing shoes.	(11)
20. All of the men are wearing hats.	20. Some of the women are wearing hats.	(8)
		(149)

RECORD: CROSS OUT WORDS OMITTED AND ENTER SUBSTITUTIONS AND/OR EXTRA WORDS PUT IN BY CHILD.

OPPOSITES (A)

(A) Naming Opposites

Materials: None

Procedure: SAY: I'm going to tell you some opposites. Up is the opposite of down. Out is the opposite of in. Now, you tell me:

1. What is the opposite of day? (night)
2. What is the opposite of big? (little)
3. What is the opposite of dark? (light)
4. What is the opposite of out? (in)
5. What is the opposite of up? (down)
6. What is the opposite of top? (bottom)
7. What is the opposite of happy? (sad)
8. What is the opposite of young? (old)
9. What is the opposite of hot? (cold)
10. What is the opposite of empty? (full)

RECORD: ENTER CHILD'S RESPONSES.

NUMERALS (A, B, & C)

(A) Counting by Rote

Materials: None

Procedure: SAY: Count for me.

RECORD: UNDERLINE ALL NUMBERS NAMED REGARDLESS OF ORDER. CHECK YES AT END OF LINE OF ALL NUMBERS IN CORRECT ORDER.

(B) Counting Blocks

Materials: 8 blocks, all same size, shape, and color.

Procedure: PLACE ALL 8 BLOCKS IN FRONT OF CHILD AND SAY:

1. Give me 2 blocks.
   REPLACE BLOCKS SO THAT CHILD ALWAYS SELECTS FROM ALL 8 BLOCKS.
2. Give me 4 blocks.
3. Give me 1 block.
4. Give me 3 blocks.
5. Give me 5 blocks.

RECORD: + FOR CORRECT, 0 FOR INCORRECT.

NUMERALS

(C) Naming Numerals

Materials: Cards with numbers 1 through 5.
Procedure: HOLD UP CARDS IN ORDER AS SEEN BELOW, AND SAY:

1. What numeral is this? (2)
2. What numeral is this? (4)
3. What numeral is this? (3)
4. What numeral is this? (1)
5. What numeral is this? (5)
6. What numeral is this? (3)
7. What numeral is this? (5)
8. What numeral is this? (2)
9. What numeral is this? (4)
10. What numeral is this? (1)

RECORD: + FOR CORRECT, 0 FOR INCORRECT.

ANIMALS AND HOMES (A, B, & C)

(A) Home Environment Language

Materials: Home Environment Language Booklet A
Procedure: SHOW CHILD EACH FRAME AND SAY:

1. Point to the top of the house.....What is it called? (roof)
2. Point to what we go in and out of.....What is it called? (door)
3. Point to the sides of the house.....What are they called? (walls)
4. Show me where you put the key to open the door.....What is it called? (keyhole)
5. Show me what lets sunshine into the house.....What is it called? (window)
6. Point to what we turn to open the door....What is it called? (doorknob)
7. Show me what we walk on.....What is it called? (floor)
8. Show me what you use to lock the door....What is it called? (key)
9. Point to what keeps the rain out.....What is it called? (roof)
10. Point to what lets us look inside.....What is it called? (window)

RECORD: FOR POINTING: + FOR CORRECT, 0 FOR INCORRECT.
FOR QUESTIONS: RECORD THE VERBAL RESPONSE.

(B) Naming Animals and Homes

Materials: 7 Animal Cards.
Procedure: HOLD UP CARDS IN ORDER SEEN BELOW, AND SAY:

1. What is this? (bear)....And what is the name of his home? (cave)
2. What is this? (boy).....And what is the name of his home? (house)
3. What is this? (fish)....And what is the name of his home? (water)
4. What is this? (bird)....And what is the name of his home? (nest)
5. What is this? (spider)..And what is the name of his home? (web)
6. What is this? (snake)...And what is the name of his home? (hole)
7. What is this? (beaver)..And what is the name of his home? (nest)

RECORD: WRITE IN RESPONSE MADE BY CHILD.

ANIMALS AND HOMES

(C) Matching Animals to Homes

Materials: 7 Home Cards; 7 Animal Cards.

Procedure: PLACE HOME CARDS ON TABLE IN NUMERICAL ORDER IN FRONT OF CHILD. HAND ANIMAL CARDS TO CHILD AND SAY: Put these animals in their homes. (IF NECESSARY, SAY: Put the Animal Cards on top of the homes in which they belong.)

HOME:	1)nest	2)hole	3)water	4)house	5)web	6)cave	7)nest
ANIMAL:	1)bird	2)snake	3)fish	4)boy	5)spider	6)bear	7)beaver

RECORD: NUMBER OF CARD AS PLACED BY CHILD.

……

PROBLEM SOLVING (B, G, H)

(B) Same and Not Same

Materials: Problem Solving: Booklet B

Procedure: SHOW CHILD EACH FRAME AND SAY:

A. Here are two pictures. Are they the same? Yes, they are the same. Now you tell me. Are they the same? (YES)

B. Are these the same? No, they are not the same. Now you tell me. Are these the same? (NO)

1. Are these the same? (YES)
2. Are these the same? (NO)
3. Are these the same? (NO)
4. Are these the same? (YES)
5. Are these the same? (YES)
6. Are these the same? (NO)
7. Are these the same? (NO)
8. Are these the same? (YES)
9. Are these the same? (NO)
10. Are these the same? (YES)

RECORD: YES, NO

(G) Sequencing 1

Materials: Picture Cards, Format sheet.

CARD ORDER

Procedure: PLACE CARDS IN FRONT OF CHILD IN ORDER SPECIFIED; PLACE FORMAT STRIP ABOVE CARDS, AND SAY:

BCA 1. The pictures go on this paper. Find the train. Put the train first. Put it here (POINT). (A)
Put the fish next to the train. (B)
Put the bell last. (C)

CBA 2. Put the bird first. (A)
Put the truck next. (B)
Put the tree last. (C)

(G) Sequencing 1 (Continued)

DBAC	3. Put the chair first.	(A)
	Put the fork next.	(B)
	Put the cat next.	(C)
	Put the house last.	(D)
ADBC	4. Put the flower first.	(A)
	Put the boy next.	(B)
	Put the rabbit next.	(C)
	Put the shoe last.	(D)

RECORD: WRITE ORDER IN WHICH CHILD PLACES CARDS.

(H) Sequencing 2

Materials: Picture Cards, Format sheet.

Procedure: PLACE CARDS IN ORDER SPECIFIED, AND SAY:

CBA 1. This is a story of a boy eating an apple. Give me the picture that shows what happens first. (A)
Now, give me the picture that shows what happens next. (B)
Now, give me the picture that shows what happens last. (C)

BAC 2. This is a story of a burning candle. Give me the picture that shows what happens first. (A)
Now, give me the picture that shows what happens next. (B)
Now, give me the picture that shows what happens last. (C)

RECORD: WRITE ORDER IN WHICH CHILD PLACES CARDS.

……

COLOR (A, B, C)

(A) Labeling Colors

Materials: 9 different color squares.

Procedure: HOLD UP COLOR SQUARE IN ORDER INDICATED BELOW AND SAY:

1. (BLUE) What color is this?
2. (RED) What color is this?
3. (YELLOW) What color is this?
4. (BLACK) What color is this?
5. (WHITE) What color is this?
6. (GREEN) What color is this?
7. (ORANGE) What color is this?
8. (BROWN) What color is this?
9. (PURPLE) What color is this?

RECORD: + FOR CORRECT, 0 FOR INCORRECT.

(B) Color Selection

Materials: 9 Color Cards with three identical objects in three colors on each.

Procedure: PLACE CARDS IN ORDER INDICATED BELOW AND SAY:
Point to the ______ _______. (e.g. blue tricycle)
(color) (object)

1. Blue tricycle
2. Red bird
3. Yellow fire engine
4. Black sock
5. White bat
6. Green kite
7. Orange telephone
8. Brown teapot
9. Purple mouse

RECORD: + FOR CORRECT, 0 FOR INCORRECT.

(C) Color Blending

Materials: Color Blending: Booklet C.

Procedure: SHOW EACH FRAME AND SAY:

1. (POINT TO YELLOW) Put your finger here. (POINT TO RED) Now put your finger here. (POINT TO BOTH COLORS) If you put these two colors together, what color would you get? (RUN FINGER OVER BOTTOM COLORS: RED, ORANGE, PURPLE) Point to it. (B)
2. (POINT TO YELLOW) Put your finger here. (POINT TO BLUE) Now put your finger here. (POINT TO BOTH COLORS) If you put these two colors together what color at the bottom would you get? Point to it. (A)
3. (POINT TO BOTH COLORS AT TOP) Look at these two colors. If you put these two colors together, what color would you get? Point to it. (C)
4. (POINT TO BOTH COLORS AT TOP) Look at these two colors. If you put these two colors together, what color would you get? Point to it. (C)
5. (POINT TO BOTH COLORS AT TOP) If you put these two colors together, what color would you get? Point to it. (A)
6. (POINT TO BOTH COLORS AT TOP) If you put these two colors together, what color would you get? Point to it. (B)

RECORD: A, B, C.

PART II - GROUP

NUMERALS (D, E, F, G, H)

(D) Selecting Number of Objects
Materials: Numerals: Booklet 1
Procedure: SHOW CHILD EACH FRAME AND SAY:

1. Mark the set that has 2 fish. (B)
2. Mark the set that has 4 birds. (A)
3. Mark the set that has 1 turtle. (B)
4. Mark the set that has 5 eggs. (C)
5. Mark the set that has 3 cups. (B)
6. Mark the set that has 1 car. (C)
7. Mark the set that has 3 dogs. (A)
8. Mark the set that has 2 lamps. (A)
9. Mark the set that has 5 cats. (C)
10. Mark the set that has 4 dolls. (B)

RECORD: A, B, C.

(E) Selecting Numbers
Materials: Numerals: Booklet 2
Procedure: SHOW CHILD EACH FRAME AND SAY:

1. Mark the 3. (B)
2. Mark the 5. (A)
3. Mark the 2. (C)
4. Mark the 1. (A)
5. Mark the 4. (C)

RECORD: A, B, C.

(F) Selecting Objects for Visually Presented Numerals
Materials: Numerals: Booklet 3; Number Cards 1-5.
Procedure: HOLD UP NUMERAL LISTED FOR EACH FRAME AND SAY:

1. Look at this numeral. (1) Mark the set with this many fish. (A)
2. Look at this numeral. (5) Mark the set with this many birds. (B)
3. Look at this numeral. (3) Mark the set with this many turtles. (C)
4. Look at this numeral. (2) Mark the set with this many eggs. (A)
5. Look at this numeral. (5) Mark the set with this many cups. (A)
6. Look at this numeral. (4) Mark the set with this many cars. (B)
7. Look at this numeral. (5) Mark the set with this many dogs. (C)
8. Look at this numeral. (3) Mark the set with this many lamps. (B)
9. Look at this numeral. (4) Mark the set with this many cats. (A)
10. Look at this numeral. (2) Mark the set with this many dolls. (C)

RECORD: A, B, C.

(G) Selecting Numeral/How Many?
Materials: Numerals: Booklet 4
Procedure: PLACE BOOKLET IN FRONT OF CHILD AND SAY:

1. Count the boats. Now mark the numeral that tells how many. (B)
2. Count the dogs. Now mark the numeral that tells how many. (E)
3. Count the houses. Now mark the numeral that tells how many. (A)

(G) Selecting Numeral/How Many? (Continued)

4. Count the butterflies. Mark the numeral that tells how many. (D)
5. Mark the numeral that tells how many birds. (B)
6. Mark the numeral that tells how many fish. (C)
7. Mark the numeral that tells how many ducks. (E)
8. Mark the numeral that tells how many cats. (D)
9. Mark the numeral that tells how many telephones. (A)
10. Mark the numeral that tells how many bears. (C)

RECORD: A, B, C, D, E.

(H) More Than, Less Than, Same Number
Materials: Numerals: Booklet 5
Procedure: SHOW CHILD EACH FRAME AND SAY:

1. Look here (POINT). The big box has one rabbit.
   Mark the small box here (POINT) that has the same number. (B)
2. Look here (POINT). The big box has three tops.
   Mark the small box that has more than three. (A)
3. Look here (POINT). The big box has four hammers.
   Mark the small box that has less than four. (B)
4. The big box has two elephants.
   Mark the small box that has the same number. (A)
5. The big box has five balls.
   Mark the small box that has less than five. (A)
6. The big box has two keys.
   Mark the small box that has more than two. (B)

RECORD: A, B.

PROBLEM SOLVING (A, C, D, E, F)

(A) Negation
Materials: Problem Solving: Booklet A
Procedure: SHOW CHILD EACH FRAME AND SAY:

1. See these two pictures. This is a truck (POINT), and this is an airplane (POINT). Which one is not a truck? Mark it. (B)
2. Which one is not a pig? Mark it. (A)
3. Which one is not a doll? Mark it. (B)
4. Which one is not a dog? Mark it. (A)
5. Which one is not a sock? Mark it. (A)
6. Which one is not a bear? Mark it. (B)

RECORD: A, B.

(C) Disjunctive Argument
Materials: Problem Solving: Booklet C
Procedure: SHOW CHILD EACH FRAME AND SAY:

1. Now I'm going to tell you a story about these two pictures. Here are two boys. One of these boys is Charlie. Charlie is not holding a kite. Which one is Charlie? Mark it. (A)
2. Look at the two elephants. One of them is Sally. Sally is not holding an umbrella. Which one is Sally? Mark it. (A)
3. Here are two men. One of them is Fred. Fred is not a cowboy. Which one is Fred? Mark it. (B)
4. See the two birds. One of them is not flying. Mark the bird that is not flying. (B)
5. Look at the two pigs. One of them is Peter. Peter is not crying. Find Peter. Mark it. (A)
6. See the two boys. One of them is Johnny. Johnny is not eating the corn. Which boy is Johnny? Mark it. (B)

RECORD: A, B.

(D) Double Negation
Materials: Problem Solving: Booklet D
Procedure: SHOW EACH FRAME AND SAY:

1. Find something that you cannot eat. Mark it. (B)
2. Find someone who is not sitting. Mark it. (A)
3. Find something that is not a flower and is not a table. Mark it. (C)
4. Find something that cannot open a door and cannot cut. Mark it. (A)
5. Find something that cannot jump and cannot hold water. Mark it. (B)
6. Find something that is not cold and cannot see. Mark it. (C)
7. Find something that is not on top of a table and cannot talk. Mark it. (A)
8. Find something that is not under a table and you cannot ride in it. Mark it. (B)
9. Find something that cannot swim and cannot fly. Mark it. (A)
10. Find something that you cannot wear and that does not grow. Mark it. (C)

RECORD: A, B, C.

(E) Ordering

Materials: Problem Solving: Booklet E

Procedure: SHOW EACH FRAME AND SAY:

1. Mark the picture that is first. (A)
2. Mark the picture that is last. (C)
3. Mark the picture that is in the middle. (B)
4. Mark the picture that is first. (A)
5. Mark the picture that is in the middle. (B)
6. Mark the picture that is last. (C)

RECORD: A, B, C.

(F) Categories

Materials: Problem Solving: Booklet F

Procedure: SHOW EACH FRAME AND SAY:

A. You're going to find some pictures that go together. (POINT) The top picture shows some carrots. Carrots are food. Look at the pictures on the bottom (POINT TO 3 CHOICES). Which bottom picture goes with the carrots? Mark it. (CONFIRM OR CORRECT BY POINTING) The banana goes with the carrots. They are food.

1. (POINT) Look at the chair. Find the picture that goes with the chair. (RUN FINGER OVER 3 CHOICES) Mark it. (A)
2. (POINT) Look at the shoes. (INDICATE 3 CHOICES THROUGHOUT) Mark the picture that goes with it. (C)
3. (POINT) Look at the bicycle. Mark the picture that goes with it. (B)
4. (POINT) Look at the train. Mark the picture that goes with it. (A)
5. Look at the shirt. Mark the picture that goes with it. (B)
6. Look at the stove. Mark the picture that goes with it. (C)
7. Look at the cow. Mark the picture that goes with it. (B)
8. Look at the boy sitting. Mark the picture that goes with it. (A)
9. Look at the frog. Mark the picture that goes with it. (B)
10. Look at the boat. Mark the picture that goes with it. (C)

RECORD: A, B, C.

SHAPES

Shapes

Materials: Shapes Booklet

Procedure: SHOW EACH FRAME AND SAY:

1. Find the circle. Mark it. (A)
2. Find the triangle. Mark it. (C)
3. Find the square. Mark it. (A)
4. Find the picture with a circle in it. Mark it. (A)

Shapes (Continued)

5. Find the picture with a square in it. Mark it. (C)
6. Find the picture with a triangle in it. Mark it. (B)

RECORD: A, B, C.

LETTER RECOGNITION (A, B, C, D)

(A) Lower Case Letters

Materials: Letter Recognition: Booklet A: Lower Case Letters
Procedure: SHOW EACH FRAME AND SAY:

1. Find the letter "k". Mark it. (1)
2. Find the letter "h". Mark it. (3)
3. Find the letter "f". Mark it. (2)
4. Find the letter "j". Mark it. (2)
5. Mark the "t". (1)
6. Mark the "e". (3)
7. Mark the "w". (1)
8. Mark the "d". (3)
9. Mark the "s". (2)
10. Mark the "l". (3)

RECORD: 1, 2, 3.

(B) Upper Case Letters

Materials: Letter Recognition: Booklet B: Upper Case Letters
Procedure: SHOW EACH FRAME AND SAY:

1. Find the letter "U". Mark it. (3)
2. Find the letter "E". Mark it. (2)
3. Find the letter "N". Mark it. (3)
4. Find the letter "K". Mark it. (1)
5. Mark the "G". (1)
6. Mark the "I". (2)
7. Mark the "W". (3)
8. Mark the "R". (1)
9. Mark the "A". (2)
10. Mark the "F". (2)

RECORD: 1, 2, 3.

(C) Vocabulary

Materials: Letter Recognition: Booklet C: Vocabulary

Procedure: SHOW EACH FRAME AND SAY:

1. Find the word "top". Mark it. (2)
2. Find the word "cam". Mark it. (3)
3. Find the word "not". Mark it. (3)
4. Find the word "hop". Mark it. (1)
5. Mark "hen". (2)
6. Mark "sat". (1)
7. Mark "bed". (1)
8. Mark "had". (3)
9. Mark "dig". (2)
10. Mark "fat". (1)
11. Mark "Bob". (3)

10. Mark "Tom". (2)

RECORD: 1, 2, 3.

(D) Rhyming

Materials: Letter Recognition: Booklet D: Rhyming

Procedure: SHOW EACH FRAME AND SAY:

1. Let's name these pictures: (POINT) This is a pig, boat, and hat. I'm going to say a word. Listen carefully: "big". You say it: "big". Now you mark the picture that ends with the same sound as "big". (1)
2. Listen: (POINT) shoe, chair, fly. Now say the word "high". Mark the picture that ends with the same sound. (3)
3. Listen: (POINT) cat, horn, bear. Now you say the word "mat". Mark the picture that ends with the same sound. (1)
4. Listen: (POINT) tree, man, bike. Say the word "tan". Now mark the picture that ends with the same sound. (2)
5. Listen: (POINT) snake, bed, doll. Say the word "bread". Mark the picture that ends with the same sound. (2)
6. Listen: (POINT) lion, dog, hat. Say the word "rat". Now mark the picture that ends with the same sound. (3)

RECORD: 1, 2, 3.

APPENDIX E

Order of Presentation for Treatments, by Class

	Site 1		Site 2		Site 3		Site 4	
Week	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2
1	6	4	4	5	1	8	7	2
2	3	10	10	3	8	9	9	12
3	10	3	11	9	5	12	3	10
4	4	2	6	12	12	2	6	11
5	5	11	2	6	9	7	12	1
6	11	5	7	4	3	6	5	6
7	2	8	12	7	6	3	4	5
8	12	9	9	11	7	5	10	8
9	1	7	3	1	2	4	8	9
10	7	1	5	10	4	10	2	4
11	9	12	8	2	10	11	11	3
12	8	6	1	8	11	1	1	7

Order	Sequence	Order	Sequence	Order	Sequence
1	A1,A2; B1,B2; C1,C2	5	B1,B2; C1,C2; A1,A2	9	C1,C2; A1,A2; B1,B2
2	A1,A2; C1,C2; B1,B2	6	B1,B2; A1,A2; C1,C2	10	C1,C2; B1,B2; A1,A2
3	A2,A1; B2,B1; C2,C1	7	B2,B1; C2,C1; A2,A1	11	C2,C1; A2,A1; B2,B1
4	A2,A1; C2,C1; B2,B1	8	B2,B1; A2,A1; C2,C1	12	C2,C1; B2,B1; A2,A1

A = UCLA Preschool Language; B = BRL Readiness Program; C = Placebo Control

e.g., Order 1 = A1,A2; B1,B2; C1,C2. This sequence would be Treatment A, Class 1, then Class 2; Treatment B, Class 1, Class 2; and Treatment C, Class 1, Class 2.